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SASOM
South African Society
of Occupational Medicine
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South African Society of
Occupational Medicine (SASOM)



SAIOH

Southern African Institute for
Occupational Hygiene (SAIOH)



Mine Medical Professionals
Association (MMPA)

An accredited peer-reviewed journal of the Department of Higher Education and Training (DHET)

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Volume 29, Issue 4, 2023

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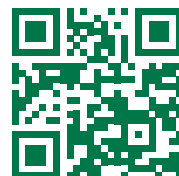
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SOUTHERN AFRICA

Volume 29, Issue 4, 2023

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Gill Nelson,
Editor-in-Chief

Substituting one hazardous substance (or type of gloves, in this case) does not guarantee 'safety'.

The paper on farm workers, by Mhlanga et al., and the one on workers who repair and maintain South Africa's electrical distribution network, by Qwemeshe et al., bring to mind the effect of climate change on workers who are required to spend much of their time outdoors. Climate change, driven by global warming, results in extreme weather events such as shifts in temperature, altered precipitation patterns, and increased frequency and intensity of extreme weather events.² Global warming is anticipated to exacerbate the health hazards associated with various weather conditions in outdoor occupations.³

Global warming contributes to an overall increase in temperatures, leading to more frequent and prolonged heatwaves. Working in high temperatures is associated with heat exhaustion, heatstroke, dehydration, and fatigue, and excessive exposure to UV light causes sunburn and skin cancer. Outdoor workers who already face the risks of heat-related illnesses will experience heightened dangers as the intensity and duration of extreme heat events rise. As temperatures rise, the geographic range of disease-carrying vectors, such as mosquitoes and ticks, may expand, increasing the risk of vector-borne diseases for outdoor workers.

Climate change is linked to an increase in the frequency and severity of extreme weather events, such as storms, tornadoes, and heavy rainfall, as also experienced in South Africa.⁴ Outdoor workers may face higher risks of injury and exposure during these events, which include flooding, landslides, and other weather-related disasters. Strong winds are hazardous for those who work at heights, and also increase the risk of injury from flying debris; while wet, slippery surfaces increase the risk of falls, and prolonged exposure to damp conditions contributes to dermal and respiratory problems.

With climate change comes an increase in the frequency of wildfires and increased levels of air pollution. Outdoor workers may thus be exposed to increasingly poor air quality, leading to respiratory and other health issues.

In a review of research on the impacts of climate change on occupational health and safety, Ferrari et al. (2023) reported that the majority of articles (approx. 86%) focused on rising temperatures, while only a few

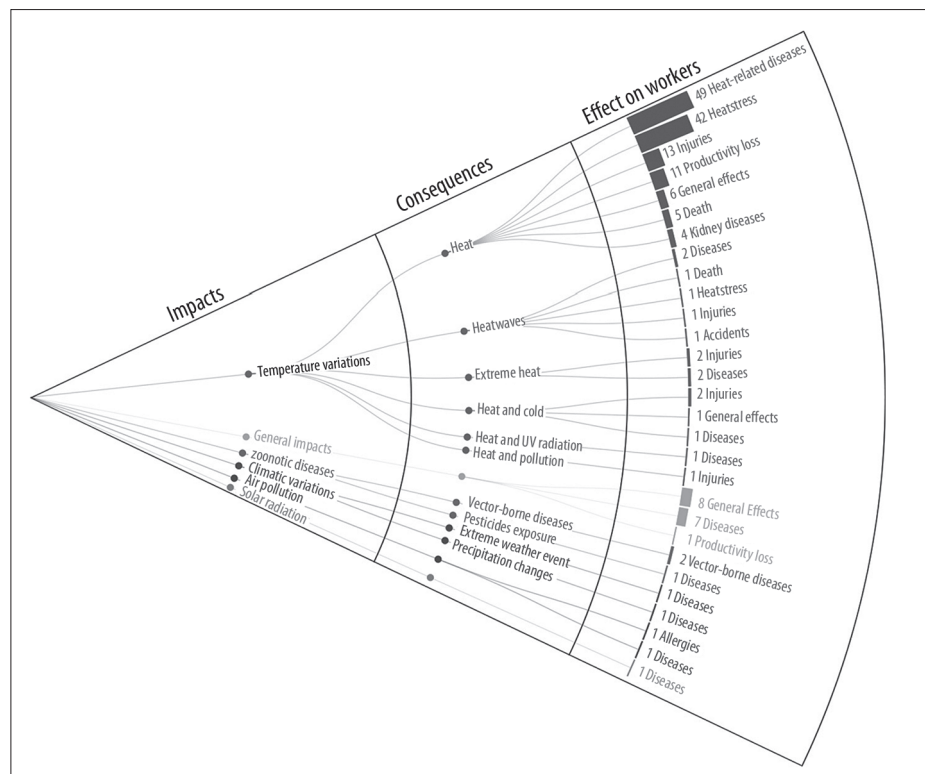
addressed other effects of climate change such as air pollution, vector-borne diseases, and extreme weather events.⁵ Most of the papers also focused on agricultural and construction workers.

Some recommendations to mitigate the health and safety risks associated with outdoor work are to train workers to recognise and appropriately respond to weather-related hazards, to provide personal protective equipment (PPE) such as suitable quality clothing, sunscreen, and hydration kits, and to allow flexible working schedules to enable workers to avoid extreme weather conditions. Where appropriate, shelters should also be provided.

However, outdoor workers in the informal sector, and those working in small and medium-sized enterprises (SMEs), may remain susceptible to the consequences of climate change. These vulnerable groups should not be neglected in strategies designed to reduce the health and safety risks associated with climate change.

REFERENCES

1. Naranje N, Paul, Parate KP, et al. Comparative assessment of hypersensitivity reactions on use of latex and nitrile gloves among general dental practitioners: a cross-sectional study. *Cureus*. 2023; 15(10):e46443. doi: 10.7759/cureus.46443.
2. Centre for Climate and Energy Solutions. Extreme weather and climate change. C2ES; 2023. Available from: <https://www.c2es.org/content/extreme-weather-and-climate-change/> (accessed 10 December 2023).
3. Filomena M, Picchio M. Unsafe temperatures, unsafe jobs: the impact of weather conditions on work-related injuries. GLO Discussion Paper, No. 1280. Essen: Global Labor Organization; 2023. Available from: <https://www.econstor.eu/bitstream/10419/270972/1/GLO-DP-1280.pdf> (accessed 9 December 2023).
4. Naidoo J. Extreme weather bouts becoming more frequent in South Africa. IOL; 2023 November 14. Available from: <https://www.iol.co.za/news/weather/extreme-weather-bouts-becoming-more-frequent-in-south-africa-ef813afe-f26a-4328-8987-2814102daa2f> (accessed 10 December 2023).
5. Ferrari GN, Leal GCL, Thom de Souza RC, Galdamez EVC. Impact of climate change on occupational health and safety: a review of methodological approaches. *Work*. 2023; 74(2):485-499. doi: 10.3233/WOR-211303.



Climate change's impacts, consequences, and effects on workers

Source: Ferrari et al., 2023⁵

Tshiamiso Trust Medical Reviewing Authority not transparent

I refer to the article in Vol. 29 Issue 3, 2023 published in *Occupational Health Southern Africa* on behalf of the Tshiamiso Trust: 'Tshiamiso Trust Reviewing Authorities commence with their dispute resolution function'. https://www.occhealth.co.za/_assets/articles/350/2440.pdf

May I politely point out that the Medical Reviewing Authority (MRA) is a clandestine body whose members are a secret. This makes peer review most difficult, and it is further complicated by the fact that the MRA does not provide detailed reasons for a finding against a former worker. For example, it simply states, "no silicosis or respiratory impairment", without providing the radiological diagnosis in accordance with the ILO International Classification of Radiographs


of Pneumoconioses (1/0, 0/0, 2/1, etc.), and/or the spirometry result, e.g. FVC = 65% of predicted.

This makes an appeal for review of the findings by an occupational medicine practitioner most difficult. The legal opinion that we have obtained is that this is a violation of the Promotion of Administrative Justice Act, but the workers cannot afford to take the matter on legal review.

I welcome the Tshiamiso Trust's answer to the above issues.

Dr Rhett Kahn
MBBCh, DOH, DTM&H (Rand), DGG, DGA (Pta)
e-mail: rkahn@icon.co.za 

The Editor of Occupational Health Southern Africa gave Tshiamiso Trust sight of this letter, after which the names of the medical practitioners serving on the Medical Reviewing Authority (MRA) were published on its website. We acknowledge that Prof. Rodney Ehrlich is very respected in the field of silicosis, as is

Prof. Rajen Naidoo. However, Prof. Naidoo is listed as a consultant on the Tshiamiso Trust, which is not reflected in the Trust Deed. It is noted that Dr Audrey Vukosi Banyini also serves on the Medical Certification Panel – the decisions of which are reviewed by the MRA. 

Tshiamiso Trust responds

Thank you for giving the Tshiamiso Trust the opportunity to respond to the letter submitted to you by Dr Rhett Kahn. The Trust Deed authorises the Trustees to appoint a qualified medical practitioner with experience in the evaluation of respiratory impairment and occupational lung diseases to fulfil the dispute resolution role of the Medical Reviewing Authority (MRA).

The MRA comprises of the following registered medical practitioners:

Main members:

- Dr Audrey Vukosi Banyini
- Prof. Rodney Ehrlich

Consultant:

- Prof. Rajen Naidoo


The names of the MRA and the Certification Reviewing Authority are now published on the Tshiamiso Trust website.

As per the Trust Deed, the MRA reviews the Certificate of Medical Finding, the Medical Report to which it relates, and ancillary documentation, and may consult with one or more medical practitioners, including the Accredited Practitioner who issued the Medical Report, and the medical practitioner (or practitioners) who constituted the Medical Certification Panel that issued the Certificate of Medical Finding. When the MRA adjudicates a dispute, they review the detailed Medical Report, which includes the chest radiograph and spirometry result. This ensures a thorough and fair process.

The determination of the MRA in each case is final and binding on the Disputing Claimant and the Trustees, unless the Trustees determine that the MRA has clearly and manifestly misapplied the principles for determining diagnoses, and the criteria for Qualifying Diseases, contained in Schedule H, in which event the determination shall be referred to the MRA for reconsideration. The Trust Deed does not stipulate an option for a review on appeal by an external occupational medical practitioner.

The certificate issued to claimants outlines the criteria not met by the mine worker which resulted in an ineligibility certification. Claimants can request access to any records, including medical records held by the Trust, should they need a view of the details. The request must be made in terms of the Promotion of Access to Information Act, 2000 (PAIA) using the prescribed Request for Access to Record form (Form 2), which is to be completed and submitted to the Information Officer at paia.requests@tshiamisotrust.com.

We remain committed to ensuring that all eligible mine workers receive the compensation that is due to them, seeking to give claimants the best chance of a positive outcome, within the confines of the Trust Deed.

Yours sincerely
Dr Munyadziwa Kwindu
Chief Executive Officer 

Tribute to Professor Peter Adrian Leggat

1961–2023

Mary Ross and Albie de Frey

It was with profound shock and disbelief that we learned of the death of our colleague and friend, Peter Leggat, following a stroke and heart attack in Brisbane while travelling home from a Sydney conference in September. A mere two weeks previously, he had retired from James Cook University after 30 years of service, as Professor Emeritus and Director-Emeritus, World Health Organization (WHO) Collaborating Centre for Vector-borne and Neglected Tropical Diseases. The reality dawned during his online funeral at which his close colleagues described his tremendous contribution to medicine, nationally and globally.

We first met Peter in 1998, while he was conducting research in Mpumalanga and we were planning a travel medicine module for the MSc in Epidemiology and Biostatistics at the University of the Witwatersrand (Wits). The course started in 2000 in collaboration with James Cook University in Townsville, Australia, and the South African Department of Health, which sought training to license providers of the yellow fever vaccine in South Africa. Peter came to South Africa regularly to present the lion's share of the course content based on the textbook that he wrote to train general practitioners in Australia and New Zealand. Subsequently, he served as the external examiner for the Wits postgraduate short course organised by the South African Society of Travel Medicine.

Over the last two decades, Peter was not only a generous source of wisdom, but was also an unassuming, convivial companion with whom we shared great fun in our many escapades related to our course and the many International Society of Travel Medicine (ISTM) conferences that we all attended. Outside of collaborating on presentations and workshops, our pleasurable adventures centred on food, sightseeing, and shopping on a shoestring around the globe in Geneva, Montreal, Shanghai, Lisbon, Edinburgh, New York, and Basel, plus Brisbane, Melbourne, Cape Town, and Gqeberha in our home countries.

One of the memorable course-related experiences entailed teaching in the Western Cape. Since the host organisation could not provide assistance for the course, Peter and our team had to use all our booked-in luggage allowance to transport 100 kg of paper notes, with only carry-on bags for our personal belongings. Finally in Stellenbosch, we spent a night sorting out the 120 files. The next day, Peter and Mary trudged in the searing heat to buy the last four flip-chart markers left in the city's stationery shops, and find the one-and-only photocopy outlet. Despite his jet lag, Peter endured these setbacks with his typical good humour.

Peter's CV demonstrates his academic and research accomplishments, and personal accolades, to which most of us can only aspire. At the age of 30, Peter became a Founding Fellow of the Australian College of Tropical Medicine, to which, as President, he honoured both of us with honorary fellowships soon after we established the Travel Medicine Course in South Africa. In addition, he established and became Deputy Editor-in-Chief for the Australian College of Tropical Medicine journal, *Tropical Medicine and Infectious Disease*,



Prof. Peter Adrian Leggat

Photograph: courtesy of Prof. Mary Ross

"Sometimes you will never know the value of a moment until it becomes a memory."

—Dr Seuss

for which we are both members of the editorial board. In recognition for his exceptional assistance in establishing travel medicine in South Africa, we contributed to his being acknowledged through a Fellowship of the College of Public Health Medicine (SA), a Fellowship of the Faculty of Public Health (UK), and as Visiting Professor to the University of the Witwatersrand.

As an academic researcher, Peter published more than 500 journal papers (with more than 9 000 citations), including several in *Occupational*

Health Southern Africa. He also wrote more than 100 book chapters and 30 books, and presented in excess of 400 papers at national and international conferences. He was Immediate Past President of the ISTM, a member of the Australasian Public Health Medicine Council, and a member of the Expanded Board of the International Federation for Tropical Medicine. Peter was also a medical officer in the Australian Army, a colonel in the Australian Defence Force, and an honorary aide-de-camp to the Governor-General of Australia. His exceptional service to the community was recognised by many prestigious awards such as recognition as a Member of the General Division of the Order of Australia, and as a Knight of Grace of the Order of St John. In spite of his many academic achievements and awards in various fields of medicine, Peter was self-effacing and very generous in sharing his knowledge and supporting colleagues in their endeavours.

Our last personal contact with Peter was in May 2023 at the ISTM conference in Basel, where he completed his presidential term. Subsequently, we received his annual 'Christmas in July' letter that described the excitement of completing and furnishing his retirement home in Thailand to which he was looking forward to moving with Urepon, and his trip of a lifetime to Quito and Galapagos, Ecuador, for a Scientific Programme Committee. In addition, we were negotiating with Peter to write a guidance note on occupational dengue for *Occupational Health Southern Africa* as an expert in the field and an active member of the Scientific Committee: Biohazards and Occupational Health for the International Commission on Occupational Health.

Following his retirement, Peter was apparently intending to research into why people died while travelling: as a colleague of his said, *"an irony as he became the first statistic"*.

Our sincere condolences go to his wife, Urepon (Pan), and father, Bruce, as well as global friends and colleagues in travel medicine, tropical medicine, public health, and occupational medicine. Thank you for the opportunity to attend the very moving funeral service from afar, online. We shall remember Peter for his unwavering encouragement, guidance and friendship over the last 25 years, and cherish the many wonderful memories. 🌍

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Amtronix and **Stanyer Electroserve** now offer a comprehensive range of Bacterial/Viral filters for Pulmonary Function and Spirometry from **CHP**

CHP filters use a high-quality electrostatic filtration medium with filtration efficiency exceeding 99%, capable of trapping bacteria, viruses and other micro-organisms.

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- Excellent filtration efficiency of bacteria, viruses and micro-organisms
- Low resistance to airflow for accurate Spirometry and lung function results
- Exceeds ATS/ERS guidelines for all criteria

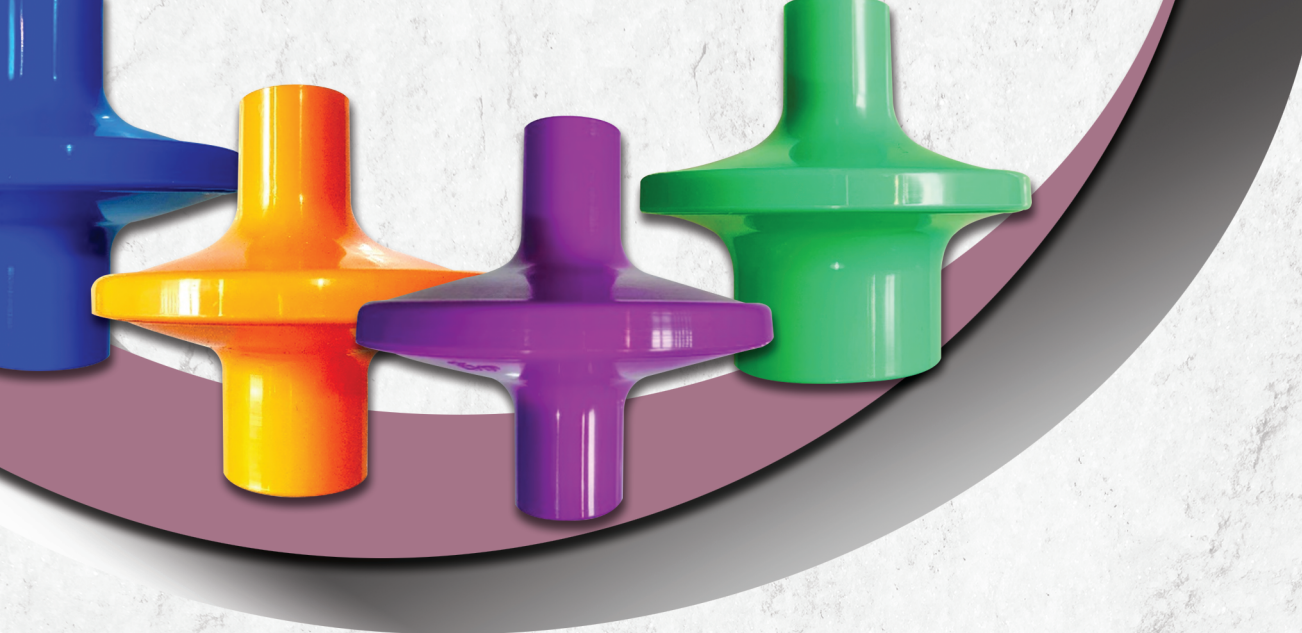
Specifications:

Filtration efficiency: > 99%

Differential pressure: < 1.5cm/H₂O/L/sec

Minimal deadspace: < 42 ml

*Specifications are filter dependant. For detailed specifications please contact us.



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Product Code	Spirometer	Model
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	Vitalograph	ALPHA Touch ALPHA 6000 In2itive
	Micro Medical	All models
	Schiller	SP-260
	MH	LA303
	COSMED	microQuark Quark Spiro Pony FX
	CONTEC	All models

Product Code	Spirometer	Model
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		Spiro Pro
		Vyntus SPIRO PC Vyntus ONE
		Short Adaptor
	Vyaire	Short Adaptor
		Short Adaptor
		Short Adaptor
		Short Adaptor
		All models
	AME	
	IQ TeQ	
	ORCAwave	
	MSG	
	Thor/Spirosonic	

Product Code	Spirometer	Model
PFT-2044 (Small) PFT-2544 (Standard) PFT-2244 (Oval)	nSpire	Digidoser KoKo HDcpet 6000 Sx 1000 NHD4500

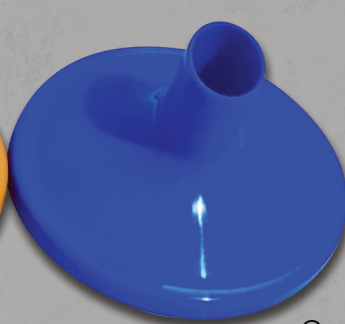
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IOSH opens call for research proposals

The Institution of Occupational Safety and Health (IOSH) is inviting proposals for research that focus on some of the key areas facing the profession.

IOSH is calling on researchers and academics to submit their proposals as it looks to enhance its understanding of upholding workplace health and safety standards around the world. The three areas it is looking for proposals on are:

- Investigations into work-related adverse health outcomes
- Occupational health training for occupational safety and health (OSH) professionals – context, challenges, and opportunities
- Algorithmic management and OSH risks in a digital workplace

Nicole Rinaldi, Director of Professional Services at IOSH, said: *“These three areas have been selected as they play a key part in the OSH profession and the world of work currently and can have a positive impact on workers’ lives.*

“We are aiming to fund timely and original research which supports the move to establish a greater evidence base for health and safety policies and practice. This can then help us make significant strides towards achieving our vision of a safe and healthy world of work for all.”

Investigations into work-related adverse health outcomes

With 12 billion working days lost globally every year to common mental health disorders, and work-related health problems causing an economic loss of 4–6% GDP for most countries, IOSH believes that this area is still under-investigated.

Various reasons have been cited for this lack of investigation, including lack of knowledge on how to investigate them, lack of training and understanding on the health effects of workplace exposures, and the latency of disease.

IOSH is seeking proposals from experienced researchers into the barriers and facilitators of such investigations. It is also looking to develop a framework, model, or guidance for use by multidisciplinary professionals.

Occupational health training for OSH professionals

According to the World Health Organization and International Labour Organization, work-related illness and disease is far more prevalent than workplace injuries.

IOSH is looking to receive proposals which explore occupational health knowledge among OSH practitioners, their required competence, and the role of OSH practitioners in preventing occupational disease in coming years.

They should explore aspects of occupational health training for OSH practitioners in countries with a sophisticated regulatory framework to evaluate:

- Knowledge of health impacts of occupational hazards
- Competencies required to prevent work-related diseases and ill health
- The role of education and training programmes in equipping the practitioner to address occupational disease

Algorithmic management and OSH risks in a digital workplace

Algorithmic management, also known as algorithmic control or digital management, refers to the utilisation of algorithms and automated systems to monitor, evaluate, influence, and discipline worker behaviour in various workplace settings.


This emerging phenomenon has gained significant attention in recent years as organisations increasingly rely on algorithms to streamline operations, improve productivity, and optimise decision-making processes. However, the implementation of algorithmic management systems also raises concerns regarding potential OSH risks in the workplace.

IOSH is seeking research that highlights the OSH impacts of cross-industry transference of digital technologies and organisations’ adoption of algorithmic management.

Applications open

IOSH is accepting research proposals from Wednesday, 15 November until 23:59 (GMT) on Monday, 5 February 2024.


Drop-in sessions will be held online on 11 December for potential applicants to ask questions.

More information about submitting proposals can be found on the website at iosh.com/research23 

Q(h)ubeka Trust update

The Q(h)ubeka Trust, now closed (see https://www.occhealth.co.za/_assets/articles/350/2439.pdf), has recently published an extensive report on its activities: Q(h)ubeka Trust 2016 to 2023: Moving forward over seven years to distribute compensation funds for silicosis. Johannesburg: Trustees of the Q(h)ubeka Trust; 2023. Available from: <https://www.qhubekatruster.co.za/>

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All press releases and other publications by the Trust are available from: <https://www.qhubekatruster.co.za/media-research-publications/> 



Allergic contact hand dermatitis due to constituents of nitrile gloves

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Fourie A, Carman HA, Ndaba N, Rees D. Allergic contact hand dermatitis due to constituents of nitrile gloves. *Occup Health Southern Afr*. 2023; 29(4):174-179.

ABSTRACT

Purpose: This report of a case of allergic contact hand dermatitis due to constituents of nitrile gloves is to bring to the attention of practitioners four important practice points: 1) allergic contact dermatitis may occur due to exposure to chemicals in nitrile gloves; 2) skin patch testing is used to identify the causative allergens; 3) targeted allergens may be necessary in addition to the baseline European standard series if the standard series is unhelpful; and 4) there are potential interventions to manage nitrile glove dermatitis.

Findings: A laboratory analyst had occupational exposure to several allergens and had worn latex gloves. She was exposed to laboratory chemicals and powdered ore dust, containing precious metals. She developed hand dermatitis and was relocated to administrative duties not requiring glove use. Her dermatitis cleared but recurred when she returned to the laboratory and started using nitrile gloves. On history, nitrile gloves and platinum group metal ore dust were consistently associated with her hand dermatitis, but laboratory chemicals were not. Latex-specific immunoglobulin E (IgE) was negative, as were skin patch tests for 13 allergens in the metal series, including salts of platinum group metals. She had positive allergic reactions to cobalt chloride, formaldehyde, nickel sulphate, and quaternium 15 in the European standard series patch tests. She did not react to the rubber chemicals in the European standard series, including thiuram mix. The patient was then tested with the rubber additives series because of the glove-relatedness of her hand dermatitis. She had positive reactions to three thiuram compounds used as accelerators in rubber gloves. The patient went on vacation during which time her dermatitis improved. She was relocated to a position without glove use or ore contact and her dermatitis did not recur.

Conclusions: An analytic laboratory worker developed hand allergic contact dermatitis due to nitrile glove constituents. The diagnosis is supported by the improvement in her dermatitis after cessation of glove use, negative metal series patch tests, and positive patch tests to accelerators found in rubber gloves. Nevertheless, a contribution to the dermatitis by metals in the platinum group metal ore dust cannot be excluded.

Recommendations: Nitrile glove constituents should be considered in wearers who develop hand dermatitis. Skin patch testing is recommended to investigate putative agents. Specific patch test series for more targeted testing may be required.

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HIV in the Eastern Cape province of South Africa threatens farm employment and food security

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Keywords

farm workers, OR Tambo
district, people living with HIV,
smallholder farms

How to cite this paper

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Occup Health Southern Afr.
2023; 29(4):180-184.

ABSTRACT

Introduction: Human immunodeficiency virus' (HIV's) threat to food security is highest in areas with high poverty levels. The OR Tambo district in the Eastern Cape province has the highest poverty rate in South Africa (80.4%); HIV prevalence is 11.4%.

Objective: The purpose of the study was to describe the threat that HIV poses to farm employment and food security in the Eastern Cape province of South Africa.

Methods: A multi-method approach was used. The quantitative component was a cross-sectional design and the qualitative component was a narrative design. The study population comprised approximately 7 000 smallholder farmers from the five local municipalities in the OR Tambo district. Participants for both the qualitative and quantitative aspects of the study were selected using convenience sampling. Quantitative data were collected using questionnaires and qualitative data were collected from face-to-face interviews. Quantitative data were analysed using descriptive statistics and the chi-square test. Qualitative data were analysed using Tesch's eight-step procedure for thematic content analysis.

Results: Five hundred and ninety-three farmers completed the questionnaire. Most agreed that HIV affects food security (n = 486, 72.0%), that HIV negatively affects food security (n = 454, 76.6%), that people living with HIV are excluded from farming activities (n = 426, 71.8%), and that HIV affects farming skills (n = 495, 83.5%). A significantly larger proportion of farmworkers older than 60 years than those who were younger perceived the threat to food security. Twenty participants described the effect of HIV on farm workers in interviews, and highlighted that HIV impacts farm skills and labour due to ill health and lost income from farming, which threatens food security.

Conclusion: HIV threatens food security among smallholder farmers in the OR Tambo district due to farmworkers' diminished capacity to work and consequent reduced income, which affects their ability to secure food.

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Health and safety incidents at a power utility in the Eastern Cape province of South Africa

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Keywords

electricity distribution, power station, workplace injuries, workplace hazards, incident root cause

How to cite this paper

Qwemeshe N, Malebo N, Lebelo K. Health and safety incidents at a South African power utility in the Eastern Cape province of South Africa. *Occup Health Southern Afr*. 2023; 29(4):185-188.

ABSTRACT

Background: Many high-risk and construction-related activities are performed in the course of distributing electricity throughout South Africa, including working at heights, driving, operating electrical networks, excavation work, and maintenance of electrical structures. South Africa has one power utility that provides electricity to the entire country. Different sectors of the utility are distributed throughout the nine provinces, with eight sectors in the Eastern Cape province.

Objective: We sought to compare health and safety incidents, and their causes, between the sectors in the Eastern Cape province.

Methods: Incident data from 2015 to 2019 were extracted from the power utility's Systems, Applications and Products in Data Processing of Environmental Health and Safety (SAP EH&S) database. The most common health and safety incidents and their reported causes are compared across sectors and described as counts and frequencies.

Results: There were 614 health and safety incidents recorded in the study period with motor vehicle accidents being the most common overall ($n = 482$, 78.5%). Incidents related to damage to equipment ($n = 48$, 7.8%), operating errors ($n = 16$, 2.8%), falls ($n = 15$, 2.4%), hand injuries ($n = 13$, 2.1%), and insect/animal bites ($n = 13$, 2.1%) were also recorded. Workers ignoring safety rules was the most common reported cause of these health and safety incidents ($n = 449$, 73.1%).

Conclusion: Motor vehicle accidents, damage to property, operating errors, falls, and hand injuries were frequently reported in the energy utility sectors in the Eastern Cape province. The most common recorded cause was workers ignoring health and safety rules. Training workers on the importance of reporting incidents, including near misses, can potentially reduce the frequency of health and safety incidents.

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7th International Conference on the History of Occupational and Environmental Health

15–17 November 2023, Durban, South Africa



Conference abstracts

The 7th International Conference on the History of Occupational and Environmental Health was organised by the Scientific Committee on the History of Prevention of Occupational and Environmental Diseases of the International Commission on Occupational Health (ICOH). Held at the University of KwaZulu-Natal during 15–17 November 2023, the conference was the first since the planned 2020 conference was cancelled due to the COVID-19 Pandemic. The conference theme, *Occupational and Environmental Health: At the Crossroads of Migrations, Empires and Social Movements*, brought together occupational and environmental medicine specialists, epidemiologists, social scientists, and historians to debate the issues facing workers and communities in their struggle for a healthier life. The scientific programme focused on the migration of workers in various time periods, the

interconnections of empires, public health in post-colonial periods, and the role of trade unions and other social movements in occupational and environmental health. The evolution of occupational and environmental health in Africa, as well as globally, was addressed.

This was the first time the conference was held in Africa, and it was attended by approximately 100 delegates from about 20 countries. There were over 50 presentations given by participants from every continent, with the majority of these from African delegates. The abstracts from our keynote, lead, oral, and poster presenters are published in this issue of *Occupational Health Southern Africa*, the official conference publication, and a conference sponsor. [📄](#)

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Keynote and lead talks


Between adulation and denunciation: the institutional benefits of ambivalence in the history of occupational medicine

Breckenridge KD

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A consensus exists in the history of South African occupational health that tracks back from McCulloch to the very earliest writings on the gold mines. There is a general scholarly agreement that the mines have acted as engines of disease in the subcontinent, and that the medical interventions and forms of compensation offered by the institutions of industrial medicine amounted to – at best – weak and ineffective

remedies, or – at worst – masks of ongoing contamination. In this talk I offered a critique of this consensus, asking – in light of the rapid decline in industrial employment and the widespread collapse of associated state institutions – what was internationally interesting and significant about the century of South African industrial medicine, and what it means for public health that the field no longer exists. 

Artificial stone silicosis as a new public issue: the Spanish case

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Over the past fifteen years, Spain and Israel have each become 'Ground Zero' for an unexpected outbreak of silicosis among workers involved in cutting, bevelling, and polishing high-silica-content material, often called 'artificial stone'. These two countries house the main producers of this material, worldwide. Medical reports have described accelerated forms of silicosis in young healthy workers exposed, and (more rarely) have paid attention to immune-mediated diseases associated with crystalline silica. Several health agencies have recommended lower occupational exposure limits (OELs). However, exposure is still active in Spain, Israel, and worldwide.

Andalusia, the most populous Spanish autonomous community, has been especially affected by this outbreak. Demand for artificial stone was fuelled by the housing boom during the first decade of the century, giving rise to intensive occupational exposure in

small workshops. From 2007 to 2019, 3 320 cases of occupational diseases due to exposure to crystalline silica recognised in Spain, can be identified with a specific industry code. Of these cases, 1 856 (55.9%) were attributable to the production and manufacture of artificial stone, of which 266 were reported in Andalusia. In 2017, an Integrated Silicosis Programme for managing quartz agglomerates was implemented by the Andalusian Regional Government.

This paper explored the ways in which different stakeholders have coped with the silicosis outbreak in Andalusia and how this epidemic has challenged the traditional understanding of silica hazards. The aim was to illustrate how artificial stone has become what is defined by the social sciences as a 'public issue'. This research is drawn from a variety of sources, including interviews with local agents, medical and public health experts, and administrative and epidemiological data. 

Working and breathing in global Africa

Hecht G^{1,2}

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For over a century, African minerals have played a particularly important role in fueling industrialised life across the globe. Today, the toxic residues of mineral extraction and use continue to plague communities throughout the continent – along, of course, with more recent forms of industrialised contamination. As the planet's environmental crisis continues to worsen, I argued that

– contrary to stereotypes of Africa as marginal and 'lagging' behind other continents – we must look to African experiences to understand the present and future of working and breathing on our planet. I explored this theme through two examples: large-scale gold and uranium mining in South Africa's Gauteng province, and air pollution in west African cities. 

Occupational lung diseases in mine workers in South Africa

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The mining sector is a major driver of economic growth in South Africa, contributing some eight percent to the country's gross domestic product in 2022 and significantly to its foreign exchange earnings. However, despite the central role of mining in South Africa's economy for over 150 years, the associated health impacts have had a negative effect on mining communities, with mine workers in the southern African region historically registering the highest incidence rates of tuberculosis (TB) of any working population in the world. Before the 19th century, South Africa had a pastoral and subsistence economy, with Cape Town being a way station for passing ships on their way to and from the East for the colonial powers and 'explorers'.

The discovery of diamonds in 1867 and gold in 1884 led South Africa on an economic trajectory that surpassed many countries. The mining economy sucked in migrant workers from many countries, especially those in southern Africa. As part of the political economy of mining, various legal instruments assisted in dispossession of Africans of their land, and imposition of various taxes moved many into a cash economy based on migrant labour. The Anglo-Boer war dispossessed the Afrikaner population, and the scorched earth policy of the British ensured that farmland was destroyed, also leading to Afrikaner men seeking employment on the mines.

The medical assessments of white workers for their employment on the mines were undertaken by state-employed doctors, given the distrust of white workers of the doctors employed by the mining companies. Black African workers were assessed by medical orderlies based at The Employment Bureau of Africa (TEBA) facilities in labour-sending areas/countries or in Johannesburg. The compensation systems for occupational injuries and occupational lung diseases in mine workers were initiated in 1894 and 1912, respectively. The occupational lung diseases compensation system covered white workers until 1973. Research was conducted by the South African Institute for Medical Research (SAIMR) into vaccines and treatment interventions for various communicable diseases in mine workers and two major international conferences covering silicosis/pneumoconiosis were convened in South Africa as early as 1930 and 1959. The lack of preventive interventions resulted in the major class action settlements from 2002 onwards in the asbestos and gold-mining sectors. Social protection rights for Black African workers were only realised in the 1970s, after the historic Durban strikes for collective bargaining and trade union rights.

The mining sector, through the Minerals Council South Africa, has a legacy programme in partnership with the Department of Health that recognises the injustices of the past, and has taken corrective steps to restore the dignity of current and ex-mine workers and peri-mining communities that will ensure the sustainability of the sector. 

Decolonising occupational health: informal workers and the struggle for occupational health


Lund F

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Against the background of informal work, and the intersection of the location of formal occupational health and safety (OHS) with formal work and workplaces, on the one hand, and global changes in the world of work on the other, WIEGO (Women in the Informal Economy: Globalising and Organising) undertook research that aimed to explore and assess potential points of entry for the extension of OHS to the majority of workers in the global south, who are informal workers often working in informal workplaces. WIEGO is a global research and advocacy organisation. Starting in 2010, WIEGO worked through and with affiliated informal worker organisations in Brazil, Peru, Ghana, Tanzania, and India. Those involved were poorer workers in cities, with a focus on poorer women. The occupational sectors were industrial outwork (piece rate work in private homes), street and market vendors, waste pickers, and domestic workers. Key aims of the study were to understand the risks faced by workers

in their workplaces; identify how to modify legal and institutional barriers to including informal workers and workplaces in OHS; understand the allocation and control of primarily municipal resources to informal workers; support organisations to make focused demands for OHS interventions; and help to build in-country research and organising capacity in OHS for informal workers.

Based on this empirical work, the paper presented lessons learned for policy development at local, national and international levels, and for practical implementation at municipal level. While the challenges in moving towards a more inclusive OHS practice are enormous, the comparative country research initiative points to avenues that can be pursued towards a post-colonial vision of OHS. This will require, however, a serious and sustained commitment from intellectual and professional leaders in the occupational health discipline. 

Guardians of workers' bodies? Trade unions and occupational health and safety


McIvor A

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This presentation contributed to an ongoing conversation on the role trade unions have played in occupational health and safety (OHS). The activities of unions were examined through the lens of experience in Britain, focusing on three themes: firstly, the idea within some of the literature that historically unions neglected workers' health, especially chronic ill-health and industrial disease; secondly, the challenges to this negative portrayal that support a rehabilitation of the historic role of unions; and, finally, the recent experience (since c1980) of unions in decline (and under attack), and the impact of this on OHS standards. It was argued that the role of trade unions needs to be contextualised and that tensions existed within some unions over jobs, wages, and health. Also, that we need to know more about working-class environmentalism. Nevertheless, there is robust and compelling evidence to support the argument

that unions were, and continue to be, a powerful countervailing force operating as the key sentinels protecting workers' bodies in production. This has been a significant buffer in hard times.

It is also undeniable that capacity to resist and to mediate these wider degenerative forces has been critically neutered now that less than a quarter of the UK workforce are union members and collective bargaining has dissipated. Occupational health standards have worsened in the process, though this manifests itself now (at least in developed economies like the UK) less in physical injury and disability (though these legacies are still visible and continue to blight traditional working-class communities), and more in deteriorating psycho-social health with the stress epidemic in the modern workplace. Workers' bodies and minds are again bearing the brunt of a profound economic transformation. 

The European greed for gold and silver, slavery, and the development of occupational health

Stanton, DW


Consultant

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The author, after producing a *Silicosis Prevention Information Resource*, including an Historical CD containing copies of the bulk of the known publications on dust prevention for the South African gold-mining industry, became involved as a consultant to legal teams in the silicosis litigation class actions for and against the South African (SA) gold-mining companies. Historical work conducted for this litigation influenced the author to research how African slavery was able to influence the poor working conditions in the SA gold mines. This work then influenced the author to conduct further extensive research for a possible book, viz. *The European Greed for Gold and Silver, Slavery, and the Development of Occupational Health*.

Brief information was presented from three of the thirty proposed book chapters: 'Hispaniola', 'New Spain' (Mexico), and 'The Welsh Slate Industry'. This covered the first Spanish missionaries

who were sent to the Indies (the Americas), and their efforts to try to improve working conditions for Native Americans forced to work by the Spanish colonists at the gold and silver mines. Some of the early Spanish Crown letters and instructions sent to protect African slaves and Native Americans in the Indies were also discussed.

The talk ended with brief information on the Welsh slate industry, which was originally funded from African slavery, and on the very distinguished nineteenth-century geologist and mining engineer, Sir Clement Le Neve Foster. He served as one of the first Inspectors of Metalliferous Mines in the United Kingdom from 1872, and from 1880 until his retirement in 1901 was the Metalliferous Mines Inspector for the North Wales District, where he also had responsibility for the underground slate mines. Some examples were given of his conspicuous service to protect the health of metalliferous and slate miners in the nineteenth century. 

Oral presentations

Importance of historical information for exposure assessment in the soft tissue paper industry

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Wood pulp production on a industrial scale started at the end of 19th century and became an important industrial product in Sweden. At around 1920, Sweden became the largest exporter worldwide of pulp. In the early 1940s, the production of crêpe paper and soft tissue paper started, mainly for the production of toilet paper, a product increasing used. Currently, the demand for soft tissue paper is still growing, especially in Asia, and production is increasing. One method to assess exposure in retrospective, historical cohort studies is to apply job exposure matrices (JEMs). This methodology started in the early 1980s and has been used both for general populations and industry-specific exposure assessment.

We have collected data from the very early soft tissue paper-mills in Sweden, comprising a cohort of 8 624 workers who started to work in the mills from the late 1940s. We performed exposure assessments with regard to paper dust and noise, based on dust

measurements starting from the 1970s from the mills. A total of 1 578 dust samples and 1 157 noise measurements were assessed. The exposure from the late 1940s to 1980 was based on reviews of historical trade association books that described changes in equipment, processes, management, and economics over the history of every paper mill in Sweden. In-depth interviews were conducted with previous and current personnel – including operators, supervisors, and upper management – to understand how working conditions in all sections of each mill had varied over the years.

From all our information we developed two mill-specific semi-quantitative JEMs; a dust JEM with seven levels from 0.01 to >10 mg/m³, and a noise JEM with seven levels from < 75 to > 100 dB(A). For every year, department and job title categories were data populated and assigned exposure levels that were used for analyses of different health outcomes. Dust exposures are considerably reduced but noise exposures are still high. 

The history of MEDICHEM and the ICOH SC on the chemical industry

Coombs WM


Retired Occupational Medicine Specialist, Past President MEDICHEM and Chair ICOH SC CI

Presenter: Mr M. Coombs **e-mail:** mcoombs@iafrica.com

A synopsis was given of the chemical industry up to 1972, the reasons for the establishment of MEDICHEM so as to serve occupational health (OH) in the chemical industry, affiliation with ICOH, and the Board of MEDICHEM approved as the ICOH Scientific Committee (SC) for the Chemical Industry.

We explored the archives of MEDICHEM and the SC, and now, close to fifty years later, we documented the successes, failures, needs for change, the future, and how this will affect OH in the chemical industry.

The last fifty years, as for the beginnings of chemistry, have brought much to be debated. The context of sustainable development (responsible care, corporate citizenship, green chemistry), new, emerging, and old technology, and the impact on and by OH professionals, ethics, and the future of the relationship of OH professionals within the chemical industry, was further explored as a finding during the search and archiving of the history of MEDICHEM and the SC.

In addition, the format of publication of such archiving and documentation was discussed, with the ICOH repository as a backdrop. 

Metal working fluids and bacteria

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Metal working fluid (cutting fluid) has historically been used during the 20th century in industry for processes such as grinding, turning, drilling, and milling. Since the 1970s, various types of non-mineral oil-based metal working fluids, including synthetic fluids, have been used in Sweden.

The mean exposure to cutting fluids in the form of either oil mist or aerosols has decreased over time in many countries, using personal monitors: 1.23 mg/m³ during the 1970s; 0.57 mg/m³ during the 1980s, and 1.0 mg/m³ during the 1990s. In Sweden, we can see the same trend; in the 1970s 5 mg/m³ oil mist, during the 1980s around 3 mg/m³ oil mist, and in the 2010s 0.2 mg/m³ aerosols.

Today, the average machining speed of the new machines is two times higher than for machines 30 years ago, and we know

that aerosol generation increases with increasing machine rotating speed. From Swedish studies, we can show that using compressed air over many years, working with half-open machines, and grinding are important factors in exposure to inhalable aerosols and in governing exposure levels.

In the 1990s, the workers were exposed to oil mist/aerosols of metalworking fluid containing *P. pseudoalcaligenes*. Twenty years later, we can see the same bacteria genera grow and many other gram-negative bacteria such as *Escherichia coli* and *Legionella ssp*. Today, we can find *Mycobacterium immunogenum* in MWF containing mineral oils. Bacterial content of the cutting fluid varies depending on the cutting fluid type and biocidal additives, and can vary between the tank and in the machine. 


History of the *Braceros* – migrant labourers in California, US

Das R

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Presenter: Dr R Das **e-mail:** rupali@flash.net

In response to labour shortages during World War II, the *Bracero* programme enabled 4.6 million Mexican migrant men to work temporarily in the United States (US). The programme began in 1942 but continued until 1965, well after the War. Workers (*braceros*) primarily served Californian agriculture. This presentation described the history of the largest guest worker programme in US history, focusing on occupational health and social issues. Sources included: published articles, unpublished reports and public access documents, and historical archives. While the programme helped provide cheap labour, *braceros* suffered from poor working conditions and mistreatment by US employers. The US- and Mexican Government-backed programme promised a minimum wage, sanitation, housing, food, and protection from racial discrimination. It attracted many impoverished rural Mexicans desperate for work. In reality, however, the selection process for *braceros* was lengthy, humiliating, and tainted by corruption. Agricultural employers frequently ignored governmental guarantees, resulting

in unpaid wages and substandard food and housing. The work was demanding and hazardous. While injury data specific to *braceros* were not collected, in 1957 there were 50 disabling injuries/1000 workers in agriculture versus 32.4 disabling injuries/1000 workers in all industries. Piece-rate compensation, the need for rapid work, and improper tools likely contributed to high rates of injuries. Ignored safety regulations and transportation accidents resulted in numerous fatalities. *Braceros* were unable to improve their working conditions, as they were denied the right to representation and collective bargaining; those who filed complaints and insurance claims faced retribution and deportation. The programme ended due to increasing recognition of the hazards faced by workers, expansion of mechanisation, and a successful labour movement leading to the formation of the United Farm Workers. The *Bracero* programme allowed the US agricultural industry to grow, while severely exploiting individual Mexican workers and influencing trade agreements to this day. 

Silicotuberculosis – unstable in history and neglected in science

Ehrlich R

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Background: What we today distinguish as silicosis and pulmonary tuberculosis have a long but contested history of biological, epidemiological and nosological association.

Methods: To try to illuminate this history, the South African published literature on gold miners over the past 100 years was examined to describe how co-occurrence and separation have been conceived.

Results: Between the turn of the 20th century and the 1930 Johannesburg Silicosis Conference, there was continuing debate about whether the ‘infective component’ of ‘miners’ phthisis’ was always present in disabling silicosis. The conference established that the diseases, irrespective of severity, were distinct. The phenomenon of subradiological silicosis was ignored in the new definitions. Mid-century papers attempted to distinguish,

inter alia, between ‘silicotuberculosis’ and ‘tuberculo-silicosis’ on grounds of chronology of dust and mycobacterial exposure and pathogenesis. By contrast, medical commentators in the mining industry challenged the aetiological linkage of the two diseases into the 1980s. Even where it was accepted, it was argued that silica in the absence of silicosis was not a causal factor, ignoring biological evidence to the contrary. While clinicians continued to emphasise the co-occurrence and diagnostic complexity of combined disease, epidemiological and laboratory studies on co-occurrence remain scarce, both in South Africa and globally.

Conclusions: Despite a century of intimate (and tragic) association of silica and *Mycobacterium tuberculosis* in the South African gold-mining industry, the varying, multiple, and ultimately unstable understanding of what is today called silicotuberculosis, along with historical resistance within the South African mining industry, have hindered scientific inquiry. 

Advancing our understanding of migration, work, and health by exploring our historical roots in social medicine

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Occupational health has evolved into a fundamentally technical and applied field dedicated to identifying and eliminating hazards found at the workplace. While this approach has led to significant reductions in occupational injury and illness, it has limited its ability to account for the social structures that circumscribe occupational health outcomes, particularly for socially marginalised populations such as immigrant workers. It has also led to the artificial, yet fundamental, distinction between work-related and non-work-related exposures, injuries, and illnesses, which has evolved into a line of demarcation between occupational safety and health and other disciplines within public health such as migrant health.

This presentation discussed key concepts that have been central to the development of occupational health over time. Specifically, it explored occupational health’s historical roots in social medicine

and how historical advances, such as the establishment of a regulatory infrastructure, may have inadvertently contributed to its increased reliance on reductionist views of cause and effect that are prevalent today. It discussed the predominance of the biomedical paradigm in occupational health, and how this has limited the field’s ability to address occupational health inequities for socially marginalised groups such as immigrants. Finally, it discussed the advantages of moving towards a bio-social approach to health and how this could lead to a more comprehensive understanding of the relationship between work and health. This understanding could also allow the field to better address the changing nature of work arrangements and the inequitable distribution of occupational health outcomes across the social axis. 

A history of the Mine Medical Professionals Association

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A few decades into the great Gold Rush of 1886, mine medical officers found themselves at the crossroads of migrations, empires, social movement, and diseases. There was a gradual unanticipated, but disturbingly extensive, burden of ill health among manual labourers from indigenous Black African populations, who were recruited locally and from neighbouring countries.

Following a meeting in March 1921 held under the aegis of the Chamber of Mines, the Mine Medical Officers Association (MMOA) was established. The first Constitution set out two principal objectives, viz. to discuss problems of special interest relating to the work of mine medical officers, and to foster friendly intercourse and exchange of views among the Association's members and other organisations connected with the mining industry.

The history of the Association is replete with scientific papers written by its members, from as early as 1924, on scurvy, meningitis, injuries, and sepsis, and, in later years, silicosis, tuberculosis,

HIV, and hearing loss – proof that the Association had not only achieved its mission but had become a leader in the management of occupational diseases. Evolving from an era steeped in safety culture, the Association steered its members towards ensuring the prioritisation of health, along with safety.

In its first 50 years, the name of the Association changed to the Transvaal Mine Medical Officers' Association, and then back to the MMOA to accommodate members from the Free State mines. In 2009, to incorporate other medical professionals and sustain its membership, it was renamed the Mine Medical Professionals Association (MMPA).

The MMPA has enjoyed a meritorious journey, fostering preventive healthcare and promoting occupational health as enablers for safety in mines. As an Association, the MMPA has achieved its vision of *"raising the profile of medicine in mining"* in the last 100 years. It celebrated its centenary in 2021. 

The colonial legacy of mercury toxicity: the story of Thor and a tribute to Mark Colvin

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Margate, a picturesque town in Kent, England would be the ominous setting of a terrifying legacy to unfold thousands of miles away in South Africa. Margate was home to Thor Chemicals, the manufacturer of mercury-based products.

In the late 1970s, concerns were raised by the Health and Safety Executive (HSE UK) about the excessively elevated airborne levels of mercury and high levels of mercury in the workers' urine. In 1987, the HSE delivered an ultimatum to Thor Chemicals – to shut down processes or face prosecution. Thor chose to relocate to the remote, semi-rural Cato Ridge, in KwaZulu-Natal, South Africa in 1988.


In South Africa, Thor transformed its English mercury production process into a mercury reclamation and recycling process. Escaping international and national scrutiny, Thor became the global leader in mercury waste recycling. In 1989, toxic mercury deposits were discovered in the nearby river. Workers began exhibiting symptoms of mercury poisoning. Urine levels of workers were found to be at least 12 times higher than the World Health Organization (WHO) limit, with workers complaining of *"going mad"*.

Protests in 1990 by non-governmental organisations and the Chemical Workers' Industrial Union (CWIU), and investigations by Dr Mark Colvin, exposed the extent of mercury toxicity among the workers. By 1994, three workers had died from mercury poisoning and 32 workers had urine mercury levels of > 200 mg/l. The Government's Department of Labour fined Thor R13 000!

In 1994, a civil claim of culpable homicide was filed against Thor Chemicals in the Court of London. In 1997 and 1998, Thor settled, paying R17 million to affected workers.

Despite its 1998 announcement of the closure of its plant, more than 10 000 drums of mercury waste remained improperly stored, stockpiled with evidence of seepage into the surrounding environment as recently as 2019.

In August 2019, a fire destroyed at least 30% of the mercury waste and released toxic waste. In October 2019, after pressure from the South African Government, a Thor Chemicals subsidiary agreed to pay R300 million to clean up the mercury waste and transport it to a Switzerland company.

While the cycle of exportation of hazards from Europe and back is complete, some thirty years later, in its wake the destruction of the lives of workers, their families, their communities, and the farming environment remains the legacy. 

OHS programmes nurtured from tailings of mines

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A mine's history of injuries and fatalities was addressed with occupational health and safety (OHS) programmes developed, from 1923, by its medical director, Paul Richards, MD (born 25 November 1892). These efforts subsequently fostered academic programme development.

Background: Great human migrations are invariably motivated by economics. Mining is the penultimate example of massive 'rushes', although more have migrated for agricultural and manufacturing opportunities. Irrespective of economic driver(s) in the rushes to riches, occupational health is often an after-thought.

Mine history: Bingham Copper Mine in Utah is the world's all-time greatest copper mine. Mining began in 1863, and production is now 19M/17.2M short/metric tons (~\$416B in inflation-adjusted total value). After arriving at Bingham, Utah on 7 October 1922, Dr. Richards took over the town's hospital, his employer, and began accident investigations, injury prevention programmes, and respiratory protection. Mining deaths were eventually all but eliminated. Dr. Richards also helped write Utah's Occupational Disease Act (1941). However, most OHS activity was relatively dormant after his death on 20 November 1958.

Hopeful future: An OHS rebirth with business-labour partnerships, built on Dr. Richards' legacy in the mining industry, is now accelerating. Efforts are spearheaded by a coalition of partners of the University of Utah/Weber State University Rocky Mountain Center for Occupational and Environmental Health (est. 1977). A series of state laws have been enacted including: (1) funding support through tax credit mechanisms (SB159, 2005 General Session (GS)); (2) incorporation of the Center into state law (1SSB234, 2007 GS); (3) statutory Center enlargement to involve a second university (2SSB172 2021GS); and (4) new, ongoing state appropriations (2022 and 2023).

Conclusion: This example shows that with industry-labour historical partnerships and government support, broad advances in OHS programmes with disease and injury reductions are possible. 

<https://www.mining-technology.com/projects/bingham/>

[https://miningdataonline.com/property/357/Bingham-Canyon-\(Kennecott\)-Mine.aspx](https://miningdataonline.com/property/357/Bingham-Canyon-(Kennecott)-Mine.aspx)

Jean Rodier: a pioneer in occupational medicine in Morocco

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Jean Rodier (3 April 1920–9 June 2003) arrived in Morocco by accident in September 1945. He became attached to the country and decided to return the year after he received his doctorate in pharmacy, to work at the Institute of Hygiene of Morocco in Rabat.


In 1946, he was appointed Head of the laboratories of toxicology and chemistry-physics at the Institute of Hygiene of Morocco. He carried out considerable work in the field of individual toxicology and was designated in this capacity as an expert at the Moroccan courts, including the Court of Appeal.

In Morocco, he was particularly interested in the mining toxicology of lead, cobalt, antimony, phosphates, and – especially manganese. He focused on the disease related to manganese, viz. manganism. This exceptional work spanned nearly twelve years, combining field research, biological essays, dust analysis, and animal testing at the Institute of Hygiene. The outcome of this research was a twenty-minute medical short film on manganism, which was given an award at the 20th Congress of Occupational Medicine in Helsinki in July 1957.

He also authored a significant number of works in the field of water. These were grouped into a 125-page introductory book, first published in Rabat in 1951. In 1956, he published a second book, the *Manual of Biochemistry Practice*, which gathered the teaching courses he gave while he was a professor at the School of Laboratory Technicians of Morocco (1948–1958).

He was appointed Head of the Industrial Hygiene Laboratory in Morocco from 1955 until his departure in 1958, and organised the Centre for Studies and Research on Occupational Hygiene in Morocco in 1956, at the dawn of independence.

During his twelve-year stay in Morocco, Jean Rodier wrote 70 articles, almost all in French, favouring national journals including *Bulletin de l'Institut d'hygiène du Maroc* and *Maroc médical*. He also occasionally published in *Les Archives des maladies professionnelles* and authored a review in *La Revue neurologique* in 1954.

He won the medical prize of Morocco in 1949 for his work on manganism, and the scientific prize of Morocco in 1957. He was decorated Knight in the Order of Academic Palms on 3 January 1961, for all the work he achieved while he lived in Morocco. 

A hidden history – perspectives on the role of women in the history of OEHS in Africa in the past 60 years

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This paper addressed the understudied subject of women in the history of occupational and environmental health and safety (OEHS) during the last 60 years in Africa. It is a period of critical importance for the economic development of Africa. The past 60 years has seen many countries in Africa gain their independence, increase their economic growth across both industrial and agricultural sectors, and the emergence of trade unions as well as improved OEHS legislation. However, the role of women in the history of OEHS in Africa is understated.

What is the historic role of women in these developments? Scattered sources of information, including 'grey literature', suggest women have, over the decades, played an important role in OEHS legislation and policy development, in teaching and training, in advocacy for improved conditions of work, for child care

and maternity and paternity leave, and for OEHS medical services as well as freedom from violence. To explore this history and start a more informed discourse that encourages research in this area, we obtained perspectives from different OEHS stakeholders and some key informants in several countries in Africa.

The review of records was triangulated with the results of a survey and interviews with OEHS stakeholders and key informants, using a qualitative interview guide informed by a structured literature review. The paper elaborated on how women played an important role in the history of OEHS during this significant economic period of Africa's development. Women asserted their role and contributed to shaping, improving, and remaking subsistence as well as public and private workplaces during this period. 

South Africa – occupational health in the non-mining industry: from 1976 to the post-COVID era

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Occupational health in the non-mining sector became an entity recognised by the South African Government in 1976. The Erasmus Commission of Enquiry (1976) into occupational health, followed by the 1979 Wiehahn Commission Report on the Industrial Relations System in South Africa, identified specific legal challenges to be addressed. After nearly 20 years, the Occupational Health and Safety Act (Act No. 85 of 1993) defined in legal terms the occupational health services that would be required. However, much earlier than 1985, non-governmental organisations became pioneers in occupational health.

The South African Society of Industrial Health, constituted in 1948, underwent various changes and was renamed the South African Society of Occupational Medicine (SASOM) in 1985. SASOM, an affiliate member of the International Commission on Occupational Health (ICOH), is tasked with promoting, protecting, and enhancing the quality of life and wellbeing of the working population of South Africa. Its members are medical practitioners registered with the Health Professions Council of South Africa (HPCSA).

In 1966, the Industrial Nurses of the Southern Transvaal met for the first time; during 1976, they changed their name to 'occupational health nurses' to be in line with international standards at that time. Since 1980, the organisation has been known as the South African Society of Occupational Health Nursing Practitioners (SASOHN); its main mandates are promoting occupational health nursing through accredited standards of practice, education, and training, and co-operation with national and international organisations.

Occupational hygiene, as a recognised discipline, came into existence in 1992 at a meeting of the transitional committee of the then Institute of Occupational Hygienists of Southern Africa (IOHSA). At a strategic meeting in 2000, the Southern African Institute for Occupational Hygiene (SAIOH) was launched; it is the officially recognised and accredited professional organisation responsible for the certification and registration of occupational hygiene professionals in southern Africa. 


Listening to the unremembered – Chinese indentureship in South Africa

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Notwithstanding the deep history of the South African-born Chinese community, discourses of ‘othering’ and ‘exclusion’ continue to be developed around them. The unremembering of Chinese indentureship to the South African Chamber of Mines in the early 20th century, in the so-called ‘Chinese Experiment’, is a case in point. Over 64 000 Chinese workers were subjected to extreme forms of exploitation, which included exposure to known deadly working conditions, police violence, and the legalised access to narcotics. While international historiography of Chinese indentureship as a system of exploitation is extensive, the post-indentureship fates of Chinese labourers is largely unknown and uncertain. For those indentured in South Africa, even less is known since all were repatriated, excepting a small number of escapees, at

the end of the scheme in 1910. The only South African indentured-Chinese labourers for whom we have certain knowledge are the group skeletons held by the Raymond A. Dart Collection of Human Skeletons at the University of the Witwatersrand. By reflecting on the continued possession and use of those skeletons for scientific research, this paper posed broader questions regarding our professional practice. Are we unremembering the migrant workers of the 2022 Qatar Football World Cup? Do mandatory medical measures involve a degree of unremembering? Do our national healthcare systems unremember workers? It was suggested that only a change of paradigm to a worker-centric, service-based model of occupational health and safety, where worker agency is enhanced, will ensure that we, the professionals, listen and remember. 

Research on chalk particles: a systematic review

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Chalk dust exposure is the inhalation of dust particles that are generated when using chalk for writing or wiping on a chalkboard. Chalk dust exposure can have negative effects on human health, especially for teachers and students who use chalk frequently in classrooms. Chalkboards were first used in the 19th century in Europe and in the United States of America, and became popular because they were cheap, reusable, and easy to erase. However, they also produced a lot of dust when writing or wiping with chalk. It is known that chalk dust exposure can cause health problems, such as eye irritation, skin irritation, respiratory tract irritation, and mucous membrane irritation. However, the history of chalk dust exposure and

related diseases is not well documented. Therefore, this review aimed to assess the history of chalk dust exposure and disease. Some studies have suggested that chalk dust exposure may be associated with an increased risk of asthma, allergies, chronic bronchitis, and lung cancer. In recent years, some alternatives to chalkboards have been developed and adopted in schools, such as whiteboards, smartboards, projectors, and tablets. These alternatives can reduce or eliminate the generation of chalk dust and improve indoor air quality in classrooms. However, these technological tools are not optimally used in countries like South Africa, due to power outages, software failure, malfunction, and theft. 

The legacy of the manufacture and use of asbestos-cement in Katanga (DR Congo)

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Hardly anything is known about the health impact of the use of asbestos in sub-Saharan Africa. We attempted to retrace the history of the manufacture and use of asbestos-cement materials in the (former) province of Katanga in the Democratic Republic of Congo (DRC).

During the colonial period, asbestos-cement roofing sheets (generally called 'Eternit') were promoted for building houses, especially in mining estates. A total of 19 851 tons of unmanufactured asbestos were imported by the Belgian Congo from 1950 to 1959, presumably for supplying two factories producing asbestos-cement materials: Eternit du Congo (ETERCO) in Léopoldville (now Kinshasa), and TRABEKA in Lubudi, Katanga (now in the Lualaba province). The latter plant produced more than 30 million tons of various asbestos-cement products from 1929 to 1977. In addition,

55 719 tons of asbestos-cement products were imported into Congo from 1953 to 1959. No data are available for the period after independence (1960), except for the period 1975–1986, when 6 167 tons of unmanufactured asbestos were imported. Asbestos was never mined in Congo and there is no evidence for environmental contamination by naturally occurring asbestos.

In a recent case report, we attributed the occurrence in a young man of a malignant peritoneal mesothelioma to his exposure to asbestos-cement materials in the house where he grew up, in a mining housing estate in the (former) Katanga.

To this day, roofs of corrugated asbestos-cement sheets are widespread, and often in tatty condition, in urban areas and mining compounds throughout southern Katanga. More cases of mesothelioma are to be expected in the future. 

History of occupational health, challenges, and way forward in Tanzania

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Background: Occupational health and safety services are crucial for sustainable development, reducing accidents and diseases. Improved worker health and safety boosts productivity, job creation, and industrial harmony. Since Tanzania's independence in 1961, occupational health and safety standards have been governed by the Factories Ordinance CAP. 288 of 1950. The nationalisation policy of 1967 led to ineffective enforcement of occupational health and safety standards, due to the Government's role as employer, enforcer, and regulator. In the 1990s, factories were privatised, causing management to prioritise production over occupational health and safety. Therefore, the Government established the Occupational Safety and Health Authority (OSHA) in 2001 to improve workplace health and safety, reduce accidents and diseases, and achieve better productivity through enforcement and promotion of occupational health and safety practices.

Methods: This was a review of the published documents related to occupational health in Tanzania. The following published documents were used in the review: Factories Ordinance CAP. 297, promulgated

in 1950; Occupational Health and Safety (OHS) Act 2003; National Occupational Health and Safety Policy 2009; A Performance Audit Report on the Management of Occupational Health and Safety in Tanzania of 2013; Occupational Safety and Health Authority (OSHA) Strategic Plan 2021–2026; Occupational Safety and Health – Country profile Tanzania 2014; and Status of Occupational Health and Safety and Related Challenges in Expanding Economy of Tanzania of 2015.

Results: Occupational health services are accessed by less than 5% of the working population in Tanzania. Only 24% of targeted formal workplaces were registered. OSHA has only 45% of the staff needed for them to perform their duties efficiently. Few doctors are qualified as occupational medicine practitioners (< 10 in the country). Over 80% of Tanzanians lack OSH law coverage and occupational health services.

Conclusion: Tanzania needs to develop an effective institutional framework to enhance OHS in the formal and informal sectors. Also, it is vital to develop a solid and effective research capacity in occupational health. 

Workers' health and the *Union Minière du Haut-Katanga* in the Belgian Congo


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During the Belgian colonial rule of the Congo (1908–1960), the private company *Union Minière du Haut-Katanga* (UMHK) had a monopoly on the extraction and processing of minerals in southern Katanga, the northern part of the African Copperbelt. Thousands of workers were employed in underground and open-cast mines, and in metallurgical plants producing copper, cobalt, uranium, and many other metals.

The economic and social history of mining in Katanga has been addressed in many scholarly publications. In the first decades, the problem of worker shortage represented a major difficulty for the industry. Initially, men were forcefully recruited from surrounding or even faraway regions to work for three to six months; poor working and living conditions led to high mortality from dysentery and pneumonia. Later, efforts were made to improve hygiene in worker camps, which were initially built following

the South African Orenstein model of dormitories. However, largely at the initiative of medical doctors, the UMHK took measures aimed at 'stabilising' the workforce. These measures consisted of building worker camps ('*cités*') with family housing, improving food rations, providing medical care, and educating children. This 'totalitarian' policy was conducted without worker participation; unions were forbidden. Nevertheless, organised forms of resistance did occur, including a violently repressed strike in December 1941. Although occupational accidents and work-related diseases are mentioned in passing, conspicuously little has been published about specific occupational safety and health issues at the UMHK. An interesting experiment, consisting of aerosolising salt solutions to increase particle size in order to prevent silicosis, was conducted in an underground mine, but the outcome of that study is unknown. 

Aluminium powder in South African mines


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Numerous unsuccessful silicosis medicinal treatments and preventatives have been used, worldwide, over many decades. Among the most well-known is the Canadian McIntyre Research Foundation's patented aluminium powder, which was used to "*reduce the solubility of silicious material*", based on animal studies. The compound is approximately 15% aluminium metal and 85% aluminium oxide. It was administered to silica-exposed miners in countries such as Australia, Canada, Chile, and Mexico, and factory workers in the USA and England, and possibly elsewhere, as a prophylaxis against silicosis. The powder was dispersed into specific areas in the workplace, such as change rooms, or inhaled directly by workers from the 1940s into the late 1970s. Mostly without their formal consent, and sometimes as a condition of employment, tens of thousands of workers were exposed to the powder: 27 000 in Ontario, Canada, alone.

Despite its widespread use globally, and the high rates of silicosis among South Africa's hundreds of thousands of gold miners, aluminium powder was not introduced into the country. We examined the reasons for the lack of enthusiasm for the 'treatment' in South Africa, notwithstanding its potential commercial advantages, being cheaper than dust control. The presentation relied, in part, on an influential 1963 report of an investigation by Prof. Ian Webster from the Pneumoconiosis Research Institute in South Africa. Webster concluded that "*There is no proof that aluminium powder has prevented the development of silicosis*", and that "*Aluminium prophylaxis does not stop the progression of silicotic fibrosis*"; but, somewhat surprisingly, recommended that "*Should the State or an industry wish to use aluminium prophylaxis, the Pneumoconiosis Research Unit should assist them*". 

Asbestos in Brazil: the process of creating agendas, subjects, and policies


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The aims of this work were to analyse the process of creating agendas, subjects, and policies concerning the production of asbestos in Brazil. It also identified and studied the Brazilian legislation on the use of asbestos, focusing on the actions of the various actors involved, and describes scientific debate on the issue. Exploratory research of a qualitative nature was carried out, using documentary research from 1970 to 2019, and drawing on theoretical contributions from the fields of sociology

and history, with special attention focused on Kingdon's work. The complexity of the interrelations between actors and the State in the formulation and implementation of public policies was demonstrated. Asbestos has been on the decision-making agenda several times, but the creation of a national public policy has occurred on only a few occasions. The use of asbestos was banned by the Federal Supreme Court, but the actors involved in the matter continue to duel. 

Reconstructing the fragmented history of 'Colinet-Caplan syndrome'

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The first description of an association between rheumatoid arthritis (RA) and pneumoconiosis is generally attributed to Anthony Caplan, who reported in 1953 on a 'peculiar' pattern on chest X-rays of south Wales coal miners with concomitant RA and pneumoconiosis. As early as 1950, however, Émile Colinet, a Belgian rheumatologist at the Saint-Pierre Hospital in Brussels, had described a 30-year-old woman with a ten-year history of diffuse rheumatic arthritis that had started two years after beginning work "in a factory where large quantities of silica flour were handled". Her chest X-ray – which Colinet did not provide – was described as 'silico-tuberculosis'. In March 1953, he reported a 34-year-old woman with clinical manifestations of both RA and scleroderma, who at age 15 had begun work in the same factory – without specifying what this factory produced.

The picture became clearer in December 1953 when Clerens, a colleague of Colinet, recapitulated the two case histories of what he called, by then, 'Colinet-Caplan syndrome'. Clerens

showed the chest X-ray of the first patient with a typical 'Caplan' pattern. Also, he provided more information on the patients' jobs: they were packaging scouring powder. It is likely that they worked in the Vim scouring powder factory near the Saint-Pierre Hospital. This seems to be confirmed by a report from the internal medicine department of the same hospital, from January 1953, of a 41-year-old woman – a Vim scouring powder worker – with fatal 'acute' silicosis. Colinet had already noted that several of the (female) coworkers of his first case had died from 'silico-tuberculosis'.

Although Colinet's name was soon dropped from the syndrome's eponym, his early reports highlight the extent to which women in this industry were struck by occupational diseases and underscore that the RA association is not limited to coal worker's pneumoconiosis, the general understanding of Caplan's syndrome. Regrettably, more reports on autoimmune disorders in scouring powder workers would follow. 

Women and girls in mine labour: from Italy to South Africa

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“How can we know what happened in the past? We cannot travel back in time, ask the people who were alive long ago. Historians use evidence that survives from the past. Like detectives, they search for clues. They piece together what they think the past was like.” (McGregor Museum, Kimberley, South Africa)

Searching for evidence on women in male-dominated work is hard to find, yet the hidden path of women and girls forced into mine labour in Italy, from the beginning of the nineteenth century, was discussed in this paper.

In Italy, women were forced into carrying the ore out of slate quarries (slate contained 25% of silica) (Meeting of Italian Scientists in Genoa, 1846); selecting lead and zinc minerals in Montevicchio mines (Sardinia), where in 1871 eight girls (10–15 years old) and three women died due to the fall of a wall (Peis Concas I, 2010); and going down sulphur mines for twelve and fourteen hours, sometimes

during the night (Jessie White Mario, 1894). At that time, Sicily was a British trading colony (Kutney, 2007) and the ‘track system’ was imported, although it had been forbidden in England since 1834. *“Sulphur mine industry occupies many thousands of workers of every sex and age... hundreds and hundreds of boys and girls go down on steep ladders along paths carved in wet ground at risk of landslide”* (Villari P, Letters from the South, 1875).

Montessori, one of the first Italian women medical doctors, attended the London International Council of Women in 1899 to ask for the prohibition of women and children under the age of 14 years from working in sulphur and other mines (ICW Proceedings, London 1899), inspired by the Factory Acts. In 1902, Italy finally had its first law on limiting women and child labour. A discussion of women in South African copper mines, and the data on silicosis among women, concluded the paper’s path. 


A history of agricultural health and safety

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The first milestone in the history of agricultural worker health and safety was the work of the Swedish archbishop, Olaus Magnus. He recognised in his *Historia de Gentibus Septentrionalibus* (1555) that grain threshers damaged their lungs by exposure to grain dust. The father of occupational medicine, Bernadino Ramazzini, generalised this observation in his seminal work, *De Morbis Artificum Diatriba* (1700), to recognising that particles in a variety of occupations were dangerous to breath. These could be dusts from animal, vegetable, or mineral sources. He particularly recognised the respiratory hazards to millers, grain sifters, horseback riders, and tobacco workers. Ramazzini noted that farmers were at high risk of pleurisy, pneumonia, and asthma, mainly due to exposure to *“the inclemency of the weather”*. In England, the Threshing Machines Act of 1878 focused on the mechanical hazards of agriculture, but the hazards of agricultural work were largely ignored as the industrial revolution focused on the dangers of

mining and manufacturing. In 1939, John Powers wrote that *“During the past quarter century the hazards of industry, transportation, mining and construction have been recognized. For agriculture...there has been no such recognition, and farming, thought the oldest occupation in the world, remains the most hazardous”*. That focus changed in the 1950s with the creation of the National Institute for Farm Safety in the US, and in the UK the Agriculture (Poisonous Substances) Act (1952), and the Agriculture Safety, Health and Welfare Act (1956). The Occupational Safety and Health Administration (OSHA) Act in the US (1970) largely ignored the agricultural workplace until 1991, when the National Institute for Occupational Safety and Health (NIOSH) was funded to create a farm health and safety programme. The recent years have recognised the reality that agricultural work is now largely and increasingly done by immigrant workers, and efforts by government, academia and non-governmental organisations have focused on this vulnerable population. 

Thomas slag pneumonia

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In 1878, the Bessemer process for steel production was modified by adding limestone to the process in order to remove phosphorous. A by-product of alkaline slag, 'Thomas slag', was generated, which could be used as a fertiliser. In Germany, it was noticed already in 1887 that workers processing the Thomas slag had a high prevalence of infectious pneumonia. In 1888, a drastic increase of deaths from lobar pneumonia, which mainly affected men in working age, was noted in an English county. The workmen themselves attributed it to inhalation of dust from a newly opened industry that was grinding and sifting alkaline slag from the Thomas process. A report from the Local County Council concluded that exposure to 'slag dust' was not the primary cause, but could be a contributing cause. In 1889, a German report concluded that workers processing Thomas slag fell ill with severe croupous pneumonia that was probably caused by pneumococci in combination with inhalation of the dust from the Thomas slag.

A German doctoral dissertation from 1890 described an epidemic of pneumonia among workers in Thomas slag mills, with high mortality in this new fertiliser-production industry. The mills were so dusty that workers two metres apart could not see each other.

The content of the slag was phosphate, lime, silica, iron oxides, and manganese compounds. The thesis also presented a pathologic section from a deceased worker, noting copious slag particles in the lung. It was explicitly stated that there were no pneumococci in the lungs. The thesis concluded that this was a pneumonia caused by inhalation of the Thomas slag that, due to its etching properties, injured the lungs. In 1909, the German Government issued rules for the workplace conditions in Thomas slag mills, but occurrence of severe, often fatal, illness remained high. From 1929, pneumonia among workers processing Thomas slag was listed in Germany as an occupational disease.

The early investigators attributed the increased susceptibility to pneumococcal infections to the irritating properties of the alkaline lime; manganese was not mentioned as a possible etiologic factor. German researchers continued to describe case series of severe pneumonia among workers processing Thomas slag. Despite this rich early history continuing well into the 20th century, over the last 50 years the condition has been largely forgotten. Modern investigational techniques have not been applied to understand more fully the mechanisms underlying Thomas slag pneumonia. 

Historical response to environmental disasters in the United States: a review of governmental intervention


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In the aftermath of the 9/11 attacks resulting in the collapse of the World Trade Center, responders and workers in the impacted area developed a myriad of diseases, including cancer. Treatment is now covered by government-funded programmes, but these treatment programmes started only after extensive lobbying by sick workers and healthcare advocates. This calls into question government's handling of worker protection and communication of air quality results following the disaster. This presentation looked at several environmental disasters in the history of the United States,

and compared the governmental response to protect workers at these disasters. We reviewed the response to radiation exposure at the Nevada Test Site, Asbestos exposure in Libby, Montana, and Silica exposure in Hawks Nest Tunnel, West Virginia. History has shown that the time it takes to institute coverage following evidence of exposure-related illnesses is prolonged, often resulting in needless morbidity and mortality. Study of the history of response to environmental disasters can improve the protection and health of workers involved in future events. 

Poster presentations

History of occupational health and safety laws in Ghana

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The development of occupational health and safety (OHS) laws in Ghana has been driven mainly by developmental and historical antecedents in the mining industry. Health and safety concerns first gained prominence following agitations among the indigenous labourers from the northern territory in the (then) Gold Coast. The labourers complained of high rates of morbidities and mortalities from tuberculosis and injuries as a result of poor sanitation, housing, and workplace air quality in the mines. The series of protests and worker agitations led to the first occupational mortality audit in the mines and the subsequent passage of several mining health legislations, including the Mining Health Ordinance to address mining area sanitation, housing, and worker health issues. Since 1925, when the first mining health ordinance was passed, several other laws have been promulgated. In fact, health and safety is a right guaranteed to all according to the 1992 Constitution of Ghana.

The three main statutes that have informed implementation of OHS in Ghana post-independence are the Labour Act 651 (2003), the Factories, Offices and Shops Act 328 (1970), and the Workman's Compensation Law PNDC Law 187 (1987). Others include: International Labour Organization (ILO) Radiation Protection, 1960 (No.115), ratified in 1961; Mining Regulations LI 665 (1970); EPA Act 490 (1994); Ghana Health Service and Teaching Hospital Act 525 (1996); Atomic Energy Commission Act 588 (2000); Public Health Act 851 (2012); and the Petroleum Commission Oil and Gas OHS policy: LI 2258 (2015).

Although there are legal instruments regulating most of the workplaces, these laws are fragmented. Moreover, the absence of a national policy on OHS in Ghana prevents the proper regulation of the occupational health space in Ghana. A draft bill of the OHS national policy is yet to be enacted into law. 


History of disease exposure in school-aged children working in artisanal mines in North Kivu in the Democratic Republic of Congo

Kabemba Lukusamph JP

Volunteers for the Conservation of Fauna and Flora

Presenter: Mr JP Kabemba Lukusamph **e-mail:** jp.lukusa@gmail.com

Artisanal mining is one of the main sources of income in Rubaya, DR Congo. In the squares of open land amidst the verdant vegetation of the territory of Masisi, in North Kivu, we do not see powerful excavators, but simply shovels, pickaxes, and muscular arms to handle them. Carriers, more or less solidly built, replace the trucks. They evacuate the ore via the small paths gullied by the torrential downpours that fall on the region during the rainy season. In Rubaya, 45 km from Goma, a dozen open-pit mining squares exploit niobium, cassiterite, and coltan (colombo-tantalite). Around the gutted earth, transformed into a mud pit at the slightest rain, young people of school age work: digging, washing minerals, sorting, transporting, etc. Judging by the grimacing faces of the young people who work tirelessly, all the tasks seem exhausting. These ores will be used in particular for the manufacture of capacitors, present in all electronic products. Demand does not seem about

to decrease, as the new digital economy is greedy for it. In 2011, the Congolese Government submitted a national action plan to the International Labour Organization (ILO) to end child labour in the mines. In particular, it planned to "make known and apply the legislation relating to child labour", "make technical and professional training accessible", and "give access to an education programme for children removed from work". It also committed "to improve the living conditions of vulnerable households", so that socioeconomic vulnerability does not push families to make their children work. The programme was ambitious, but it never passed the milestone of official adoption. The children working are exposed to neglected tropical diseases, tuberculosis, respiratory tract infections, HIV/AIDS, and viral hepatitis B. There is also a major risk of the diseases being spread in communities and increases in mortality rates of school-age children. 

SASOM:1948 to date

Kocks DJ

Chairperson of the South African Society of Occupational Medicine (SASOM)

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On 8 October 1947, the first South African Society of Industrial Health was established. The Constitution has been in existence since July 1948 as a group within the Medical Association of South Africa (MASA), presently known as the South African Medical Association (SAMA).


Since then (and still applicable today), the standards of moral or ethical decision making are:

1. The workman must retain the right to choose his own doctor and that it would be incumbent on the factory medical officer to retain any fees so earned by him, and
2. The Society will not at any time enter into discussion or negotiations with any other individuals or organisations regarding remuneration for services rendered by its members.

At the annual general meeting (AGM) in 1951, the 'Rules in the case of part-time and full-time medical appointments to factories and similar industrial organisations' were formulated. At the 1958 AGM, it was agreed to open membership to all members of the Medical Association of South Africa who have occupational health interests.

The name changed in September 1957 to the South African Society of Occupational Health. The Society was renamed again, in August 1985, to the South African Society of Occupational Medicine (SASOM) – as it is known today.

SASOM successfully initiated the *Occupational Health Southern Africa* journal (OHSa) in 1995, achieved recognition of occupational medicine as a separate medical specialty in 2005, and hosted the International Commission on Occupational Health (ICOH) 29th Triennial International Congress on Occupational Health in Cape Town in March 2009.

Current interfaces in South Africa are with NIOH, SASOHN, SAIOH, MMPA, SASTM, OTOH, Universities, FCPHM (Occ. Med) SA, HPCSA, COHSASA, Department of Employment and Labour (DoELForum), and *Occupational Health Southern Africa* journal (OHSa). International liaison and collaboration include ICOH, Occupational Health in the Chemical Industry (MEDICHEM), and the International Occupational Medicine Society Collaborative (IOMSC). 

The history of electronic waste at Agbogbloshie, Accra, Ghana

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Agbogbloshie e-waste site in Accra has existed for nearly 27 years, with a current workforce of ~4 500–6 000 workers, often untrained individuals who learn the trade on the job. This site started as a scrap market where various services such as vehicle repair, spare parts trading, welding, auto mechanics, and tyre servicing were rendered to support operations of trucks supplying foodstuffs to the yam market on the edge of the Korle Lagoon. This scrap market expanded and transitioned into an informal e-waste recycling hub, as many young males from the northern sector of Ghana, escaping the intertribal conflicts and unfavourable agricultural conditions, as well as seeking better livelihoods in Accra, enrolled for this job.

Rapid growth in informal electronic waste recycling activities (delivery and receipt, sorting, manual dismantling, and open burning) at Agbogbloshie, has been propelled by a lack of stringent enforcement policies and cost-effective technologies to manage e-waste recovery/recycling properly. Usage of rudimentary techniques in recovering valuable materials and associated pollutant emissions have

not changed much, even after the passage of the Hazardous and Electronic Waste Control and Management Bill in 2016. Pollutants emitted, especially from the black plumes observed from the open e-waste burning, are destructive to the environment and resources. Worker exposures to these hazardous working conditions, and pollutants in various environmental media at the site, predispose them to several health effects. Exposures among e-waste workers over the years have been assessed mainly through cross-sectional studies. These have estimated trace metals and organic pollutant concentrations in environmental (soil, air, fish, sediment, water) and biological (blood, serum, urine, hair) samples. Worker health studies have reported increased risk of respiratory symptoms and lung function decline among workers.

Findings from these studies have been useful in implementing health promotion campaigns and have also encouraged stakeholders to build a wire-stripping workshop, a clinic post, and a technical training support centre for the e-waste workers. 


History of occupational health in the Philippines

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In the Philippines, efforts to promote occupational safety and health were already evident during the American period, with the institution of the Employer's Liability Act No. 1874. The Act directed employers to compensate the family of a deceased worker whose death was caused by workplace conditions, or by the neglect of employers in the execution of their duty to protect the safety and health of their employees. There are other subsequent legislations aimed at providing occupational health and safety. The Workmen's Compensation Act, through Act No. 3428 of 10 December 1927, required compensation not only for death but also for illnesses and injuries caused by workplace exposures. Commonwealth Act No. 104 (29 October 1936), called the Industrial Safety Law, enforced certain rules and standards for the mining industry. Republic Act No. 1054, or the Free Emergency Medical and Dental Treatment Act (12 June 1954), stipulated the need for emergency dental services to employees. In 1903, physicians began to be employed in industries to provide medical

treatment for sick and injured workers. During 1923–1932, the Section of Industrial Hygiene was established under the (then) Bureau of Health. This was followed by the implementation of the Workers' Compensation Act No. 3428 and the Emergency Dental and Medical Service Act No. 1054. After World War II, the Philippine Association of Occupational Medicine (now PCOM) was formed (www.doh.gov.ph). In 1950, the Joint International Labour Organization-World Health Organization (ILO-WHO) Committee on Industrial Hygiene issued its first international definition of occupational health. Finally, the history of occupational health and safety started with the functions and structure of the Department of Health (DOH). By virtue of E.O. 119, the DOH Office of Public Health Service was created, which had the Non-Communicable Disease Control Service tasked with the responsibility of formulating policies, programmes, and standards primarily for the prevention and control of occupational health, cardiovascular diseases, and cancer. 

History of occupational contact dermatitis among paint workers

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Background: Paints are chemical products, which consist of resins, additives, solvents, and pigments. Exposure to paints can cause occupational contact dermatitis (OCD), which affects workers' productivity and working performance.

Objective: To describe the history of paints and OCD among paint workers.

Methodology: A retrospective cohort study was conducted; data were obtained from a literature review based on the occupational history of paint and OCD among paint workers, from ancient times to present.

Results: During the 1700s, paint production began in Europe and the United States. Further production demands arose after the Second World War. Paint composition has changed over time; currently, solvent-based paints have been replaced with water-based paints, which require more preservatives than the predecessors and, thus, increase risk of OCD in paint workers. In the 1960s, benzisothiazolinone (BIT) was introduced in the paint industry as a preservative,

which resulted in an OCD case of two paint workers. A report was published in 1976, and BIT was identified by the Danish as an important allergen to painters. In the 1980s, isothiazolinone preservative and its derivatives (methylchloroisothiazolinone (MCI), methylisothiazolinone (MI), BIT, and octylisothiazolinone (OIT)) were highly used and OCD cases increased. Also in 1982, the first two medical cases due to OIT usage among workers were published. In the early 2000s, MI was introduced as a preservative in industrial products, where the first cases of OCD due to exposure were reported by Isaksson. In 2013 MI was named as 'Contact Allergen of the Year' by the American Contact Dermatitis Society. Exposure to MCI/MI had increased, by more than six times, the OCD cases among workers from 2008 to 2015. Due to contact with different allergens and irritants, paint workers were at risk. In the United States, an estimated 13 million workers are exposed to chemicals each year and are at risk of developing OCD.

Conclusion: Excessive usage of chemicals in the paint industry has increased OCD cases among paint workers throughout history. 

Occupational Health Southern Africa – a brief history

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Occupational Health Southern Africa is the only accredited occupational health journal in the region. It was founded in 1995 by the South African Society for Occupational Medicine (SASOM) and the South African Society for Occupational Health Nursing Practitioners (SASOHN), and was later joined by the Southern African Institute for Occupational Hygiene (SAIOH) and the Mine Medical Professionals Association (MMPA). The journal provides a platform for scholarly engagement through the publication of peer-reviewed research articles, opinions, reports, news, and related matters.

In 2004, the journal was accredited by the South African Department of Higher Education and Training and, in 2011, it was added to the SABINET African Journals online platform to enhance its accessibility and visibility. It is also listed on African Index Medicus. In 2017, the manuscript submission and review processes moved to an online platform. The COVID-19 pandemic necessitated a switch from print to digital publishing in 2019, which also prompted the

overhaul of the website to make it more appealing, and comparable to top international scientific journal websites. That same year, an Editorial Advisory Panel, which includes international occupational health experts, was constituted to augment the expertise of the Editorial Board, which is constitutionally comprised of representatives of the stakeholder occupational health societies.

Over the years, the Editorial Board, Advisory Panel, and publisher have worked to transform the original magazine-type publication into a respected scientific journal. The journal conforms to the policies, procedures, and guidelines of the Committee on Publication Ethics (COPE) and the International Committee of Medical Journal Editors (ICMJE), to promote best practices in publishing. Despite the small team, 169 issues have been published to date, all of which are on the website www.occhealth.co.za. Efforts are underway to apply for international accreditation and to increase *Occupational Health Southern Africa's* footprint on the African continent. 

Effect of mining-related air pollution on human health from 2000 to 2018: the case of Zambia

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Zambia's economy has largely been mining dependent, with the copper industry dominating for more than eight decades. Increasing global demand for copper, combined with the liberalised local economic policies pursued since the early 1990s, has seen the industry grow as old mines were revived and new ones opened. Despite the greater economic opportunities the industry offers the country, mining has attendant risks such environmental and health risks. We examined the air pollution and respiratory health risks related to mining activities in the main mining area of Zambia, the Copperbelt, from 2000 to 2018.

Sulphur Dioxide (SO₂) and particulate matter of aero-dynamic size PM₁₀ and PM_{2.5} were predominant ambient pollutants from the mining operations over the years. Main sources of pollutants were flue gases from smelter operations, and dusts from within the mines and blown from abandoned waste rock. Emissions of PM₁₀ amounted to 406.8 kilotonnes/year (kt/yr) and this accounted for

35% of the total emissions. Similarly, SO₂ emission of 346.7 kt/yr were reported. The mines' operations contribute over 98% of the country's SO₂ emissions. Recent investments in mining activities are expected to yield even increased SO₂ emissions because of several new copper smelters. SO₂ and PM emissions for most of the five large-scale mines, with smelters and other licensed dischargers, were above national set limits by 111–155% (the Zambia Environmental Management Agency standards). Most residential areas in mining towns lie directly within the affected vicinity of the smelters. Generally, studies reported that for an increase of 10 µg/m³, the daily number of admissions of asthma in children increased by 1.3% (95% CI 0.4 to 2.2%), while an increase in PM₁₀ level by 10 µg/m³ was associated with 1.27%, 1.45%, and 2.00% increase in hospital admissions for heart disease, chronic obstructive pulmonary disease, and pneumonia, respectively. 

Anecdotes of medical philosophy 300 years ago from Ramazzini

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Bernardino Ramazzini lived and worked in Modena and Padua, Italy, around the turn of the 16th century. He published a collection of his orations and notes in 1710, called *The Health of Princes*. The book deals with public health in respect of the lifestyle, environment, and medical treatment of both simple country folk and nobility.

The presentation analysed Ramazzini's writings and observations about fevers, health in general, and lifestyle in Italy 300 years ago, with a discussion of the medical treatments provided.

Ramazzini was fond of relating medical anecdotes and theories. He published extensively, so much so that his publisher grew weary of his prescientific writing, saying the doctors wanted to read about clinical guidance rather than 'theories'. As a result, Ramazzini had to pay for the publication of the last chapter of *The Health of Princes* himself.

Ramazzini had strong opinions on the common blood-letting practice of the time; unlike many of his colleagues, he was not in favour of this as a panacea. He relates his treatment success in the section *Epidemic Constitutions of Modena* over a five-year period (1690), where the patient – a poor farmer – was suffering from a 'double tertian fever' with parotitis, and how "*without taking any other kind of remedy, his good health was restored by drinking abundant wine*".

The possible medical background and mechanism of the treatment used in this case, among others, was discussed. The presentation compared the medical thought and practice in Ramazzini's day with today, and distilled from the book some guiding principles still relevant for current public health. 

The rise of the occupational hygiene profession in Norway

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The title 'occupational hygienist' first came into use in Norway in the 1970s, starting with the Norwegian Labour Inspectorate employing academics with a chemical or physical background, and training them in the field of occupational hygiene. Part of the training was conducted in Sweden. Before, the term 'occupational hygiene' mainly was used in Norway to describe the field of preventive occupational medicine.

The first occupational hygienist in Norway recognised by the Norwegian Occupational Hygiene Association was Karl Wülfert. He came to Norway in 1928, after he had finished his PhD at the University of Munich (Germany) and had worked for a year in Sweden with the later Nobel Prize Winner in Chemistry, Prof. H von Euler-Chelpin. From 1931, he was involved in building up the new fish canning laboratory in Stavanger. In 1947, he became chief chemist at the new Laboratory for Chemical Analysis and Assessment of Exposure

in Norwegian Working Life in Oslo. This laboratory was the precursor of what later become our National Institute of Occupational Health. In 1977, we got the modern Worker Protection Law, the same year the first academic position in occupational hygiene was established at the Norwegian Technical University (NTH) in Trondheim. Our first professor was Egil M. Ophus. The year after, we got our first occupational exposure limit (OEL)/V list.

The Norwegian Occupational Hygiene Association was established in 1985. By 2022, the Association had grown to approximately 380 members. The number has been stable over the last 10–15 years. The density of occupational hygienists in Norway, based on the number of members of the Association, is approximately 8 500 workers per occupational hygienist. This places Norway among the top countries in the world; however, the numbers are still considered to be too low to ensure sufficient protection of the workers. 

RMA's Prevention Programme – Prevent | Protect | Prosper

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Background

In April 2022, Rand Mutual Assurance (RMA) launched the Prevention Programme, which is a strategic focus area of the business. RMA administers claims for occupational injuries and diseases according to the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 (COIDA). RMA has the licence to administer claims for both the mining and metals-related industries.

As an organisation that has existed for 129 years, there is a large amount of data available to us that informed the decision to launch the Prevention Programme. The programme is offered to our metals class employers as our statistics indicate that this class, compared to mining, has a higher number of injuries; therefore, interventions are needed to curb these. The Prevention Programme aims to assist our metals class members with improved safety, health, and wellness initiatives. Prevention is all encompassing of these important business imperatives. We believe that a safer workplace can result in safer work practices and therefore we offer our members a better opportunity for enhanced production and quality of goods. RMA understands the impact of poor working conditions and environments, and how these contribute to workplace fatalities, injuries, and diseases.

Reflecting on the effectiveness and initiatives of the programme

Since inception, the Prevention Programme has grown steadily, with a remarkable increase in the sign up of employers in 2023 from 2022. In 2022, 10 companies joined the programme and, by the end of 2023, an additional 17 companies had joined. The 27 companies that are now part of the programme range from small family-run businesses to large heavy-steel industries, including companies that manufacture vehicles and parts in the automotive sector. The increase in interest is attributed to the promotion of the programme; results are evident in the companies that joined in 2022. The growth is also attributed to companies that are battling to implement their own prevention programmes due to limited funding and resources.

In 2023, the Prevention Programme implemented several activities, which resulted in an increased uptake of members to the programme, improved safety performance of employers, and greater collaboration with our stakeholders.

Examples of some of these interventions include: solutions to close out safety audit findings, training, awareness, and medical



RMA's Prevention Programme seeks to curb the high rate of injuries in its metals class of companies

Photograph: [cookie_studio](#) on Freepik

surveillance. Of the solutions implemented, most have included occupational hygiene surveys, employees undergoing medicals, correct and appropriate personal protective equipment, and additional safety support.

In terms of advocacy, RMA hosted its first Prevention Conference, which was well received and brought the metals industry together. This was an expected outcome as a general finding identified during the gap analyses was that many health and safety professionals had not been given opportunities for continuous professional development, or to keep up to date with the legislative environment and best practices. RMA also introduced the launch of prevention days which encompass health, safety, and wellness activities to create a culture around prevention and to empower employees to know their basic health statuses.

Stakeholders and partners are vital for the success of the Prevention Programme. One important stakeholder for RMA and the metals industry is the National Union of Metalworkers of South Africa (NUMSA). RMA has committed to training approximately 3 000 shop stewards in a three-day basic health and safety course. The course will help to advance education and awareness for union members to fulfil their mandates, a major one of which is health and safety.

Plans for 2024

In 2024, the Prevention Programme will mobilise its execution of delivering prevention initiatives in the RMA members' workplaces to reduce the rates of incidents and ultimately reduce the number of claims. This will also foster a culture where prevention is seen as an important business imperative. An exciting event will be the launch of the first RMA Prevention Awards, which will recognise top talent in the metals space, aligned to prevention campaigns, innovations, teams, and employees who are advocates of prevention. The aim of these awards is not only to recognise and acknowledge such talent, but also to generate pride, excitement, and morale around prevention. In an industry such as the metals space, where prevention is not well entrenched, we anticipate that this event will ignite the need to refocus on safe production.

Another activity planned for 2024 is the inclusion of a wellness element in the programme. The aim is to assist employees working in companies that do not have the most basic of psycho-social support to obtain this through an employee assistance programme. Prevention is a dual responsibility and, whilst the programme continues to work in parallel with the employers, there is a need to recognise that psycho-social factors truly have a bearing on safe performance.

Reflecting on the work done this year, RMA is proud to state that it is a social insurer that aims to serve with compassion and care. The Prevention Programme is doing just this. Our aim is to prevent occupational injuries and diseases, protect both the sustainability of organisations and their employees, and allow for both employers and employees to prosper. Sustainability is critical to making a real difference and, in 2024, we aim for continuous improvement, the inculcation of prevention as a key business imperative and, ultimately, to carry out our purpose, which is for our members' employees to return home healthy and safe every day.

If you have any questions about the Prevention Programme and how we can work closely with you, please contact our team at rmaprevention@randmutual.co.za

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**Email: rmaprevention@randmutual.co.za
www.randmutual.co.za**

Southern Africa Tuberculosis and Systems Support Project: a multi-disciplinary and multi-sectoral approach to addressing TB and occupational lung diseases in southern Africa

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BACKGROUND

The Southern African Tuberculosis and Health Systems Support (SATBHSS) project was launched with the primary aim of strengthening the health sector's response to tuberculosis (TB) and occupational lung diseases (OLDs) in Lesotho, Malawi, Mozambique, and Zambia. Its key strategic objectives were premised on 1) improving coverage and quality of key TB control and OLD services in targeted geographic areas of the participating countries, and 2) strengthening regional capacity to manage the burden of TB and OLDs. Now at the end of its life cycle, the SATBHSS project has added immense value to the project countries' TB and OLD programmes. The project concludes with the achievement of critical systems improvement, the creation of a critical mass of experts, and substantial institutional and knowledge capital across the participating countries. This is evidenced by, among other things, improved diagnosis of TB and OLDs, ratification of pertinent occupational safety and health-related International Labour Organization (ILO) conventions, and development of national occupational health services frameworks in the project countries; it has resulted in some exclusive and important achievements and lessons. The project drastically improved several corporate, environmental, and occupational procedures to protect workers, communities, the environment, and businesses.

IMPLEMENTATION METHODOLOGY

The SATBHSS project sought to 1) implement innovative prevention, detection, and treatment of TB, 2) improve regional capacity for disease surveillance, diagnostics, and management of TB and OLDs, and 3) improve operational research and knowledge sharing regarding TB and OLDs.

The SATBHSS project was implemented as an innovative and intelligent strategy, premised on the creation of sustainable systems and programmes that would outlive the project. To this effect, the African Union Development Agency-New Partnership for Africa's Development (AUDA-NEPAD) took a participatory approach, spearheaded by the project countries under its technical guidance. The fundamental principles of the project were to create a critical mass of in-country experts, create a robust institutional memory about TB and OLDs, and improve mine inspections for silica dust control.

RESULTS

The SATBHSS project has been a game changer in the region, concerning occupational health services, TB management, and mine health inspections. Several remarkable improvements at both country and regional levels have been achieved to date.

Regional centre of excellence on occupational health and safety

The project superintended the establishment of a regional centre of excellence on occupational health and safety (CoE-OHS) located in Kitwe, Zambia. The centre has trained more than 2 000 officials in occupational health and safety, particularly in OLDs and occupational hygiene – activities that are the fundamental to primary prevention interventions. Under the project, the CoE-OHS, supported by the AUDA-NEPAD, developed and implemented a five-year strategic plan, and also developed the centre's monitoring and evaluation plans. The centre recently completed a sustainability plan, which has not yet been fully implemented and needs further support.

The project is playing a critical role in establishing the African Union Occupational Safety and Health Information System (AU-OSHIS), which is in its advanced stages. This system is a public good, and owned by member states, meaning that they control the data generated. The system is linked to the District Health Information System/Software 2 (DHIS2) and is already available in more than 53 AU member states. However, given the remaining implementation period, it is unlikely that a comprehensive implementation and scaling up will be achieved.

After the completion of the regional baseline study, several recommendations for occupational safety and health policy reforms were followed up. Consequently, several developments were realised, including 1) occupational safety and health policies developed in Lesotho, Malawi, and Zambia, 2) the ratification of several ILO instruments in the form of ILO conventions, and 3) Malawi's promulgation of the Mines and Minerals Act of 2019. More critical occupational health and safety (OHS) laws are under review, where member states require further technical support and regional harmonisations to ensure that laws align with international best practices.

Human capacity development and training

Through the CoE-OHS project under AUDA-NEPAD, the ILO International Classification of Radiographs of Pneumoconiosis (ILO-ICRP) training curriculum was developed. More than 300 medical doctors and radiologists from the project countries and beyond were trained. The curriculum has proven to be an excellent regional tool that needs to be anchored in AUDA-NEPAD, and the CoE-OHS and AU systems. The countries that participated realised several OLDs improvements, such as increased diagnosis and treatment of TB and management of silicosis among miners, improved diagnosis and management of TB among mining communities and ex-mine workers, and an increase in the number of compensated ex-miners who worked in South Africa, particularly in Lesotho, Eswatini, Mozambique, Malawi, and South Africa.


Under the project, a private sector engagement in TB control survey was conducted, which led to the development of the regional private sector engagement strategy in TB control, roadmaps and implementation, and monitoring and evaluation plans. The private sector engagement in TB strategy has been implemented in four southern African countries and has increased the number of private healthcare providers that screen, test, and treat TB patients. The project also contributed to contact tracing and finding missing TB cases among miners, ex-miners, and their families. Countries also introduced innovations such as the use of a DHIS2-based application for tracking TB patients in the private sector – from screening to treatment completion; incentivising

private health facilities to provide TB services at low cost; a contact tracing systems for index cases identified in the private sector; integrating TB into regulatory bodies' private health facilities assessment tools as well as scaling up traditional healers' screening and referral of presumptive TB cases. This work inspired the development of the AU Private Sector Engagement (PSE) in Health Framework. The AUDA-NEPAD is responsible for implementing the PSE in Health and the Regional Health Financing Hubs of the Africa Leadership Meeting (ALM).

CONCLUSION

As the project draws to a close, there is a need to sustain the initial investments carried by member states and the World Bank in TB and occupational health and safety, including private sector engagement and financial investment in health. The AUDA-NEPAD, under the Human Capital and Institutional Development (HCID) directorate, should consider establishing an occupational health and safety programme to support member states in scaling up OHS initiatives and harmonising and developing the capacity of government OHS officials.

ACKNOWLEDGEMENTS

The World Bank funds the SATBHSS project: P155658 and P173228. For more information, visit www.satbhss.org and www.nepad.org. AUDA-NEPAD acknowledges the World Bank, the project countries (Lesotho, Malawi, Mozambique, and Zambia), and partners. 

UPCOMING EVENTS

OCCUPATIONALhealth
SOUTHERN AFRICA

INTERNATIONAL

34th ICOH International Congress

Marrakesh, Morocco

28 April - 30 May 2024

Website: <https://www.occhealth.co.za/pdf/ICOH2024FirstAnnouncement.pdf>

8th World Conference on Research Integrity

MAICC, Athens, Greece

2-5 June 2024

Website: <https://wcric2024.org/>

Registration: <https://wcric2024.org/registration-fees/>

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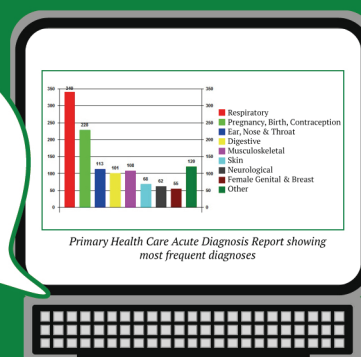
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News from the SASOM National Office

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SASOM Annual Congress 2023: a virtual event in four sessions

Following the success and good attendance at the Annual Congress in 2022, which was held in a fully digital format in four sessions across four months, the 2023 Annual Congress of the South African Society of Occupational Medicine (SASOM) was held in the same format. The theme was *Occupational health practice in 2023: shining a light on the shadows of medicine*, and comprised four sessions on the last Friday of the months of June, July, August, and September 2023. Each session was CPD-accredited for four CEUnits by the South African Medical Association (SAMA).

The sub-themes and presentations are listed below, per individual session:

Session 1, 30 June 2023: Good practice for occupational health medical practitioners (OHMPs)

- Ass. Prof. Jason Kai Wei Lee (National University of Singapore, and Chair of the International Commission on Occupational Health (ICOH) Scientific Committee on Thermal Factors) – ‘Workers in a warming world: more than just heat injuries and productivity losses’
- Prof. Johan du Plessis (North-West University (NWU), and Southern African Institute for Occupational Hygiene (SAIOH)) – ‘Additive manufacturing/3D-printing’: an emerging occupational health concern or not?’
- Michelle Bester (Tshwane University of Technology (TUT), South African Society of Occupational Health Nursing Practitioners (SASOHN), and Secretary of the ICOH Scientific Committee on Education and Training in Occupational Health) – ‘The role of primary healthcare (PHC) in occupational health: primary identification, initial management and referral’
- Prof. Emeritus Carel Hulshof (University of Amsterdam, The Netherlands, and Secretary of the ICOH Scientific Committee on Effectiveness in Occupational Health Services) – ‘The ‘haves and have-nots’: lessons from occupational health services in corporates, small- and medium-scale enterprises, and what about the informal sector?’

Session 2, 28 July 2023: Updates in legislation, compensation, and ethics in occupational health

- Dr Jan Lapere (Occupational Health Legal Advisor, and SASOM ExCo) – ‘Legal accountabilities of the occupational service provider: wading through the changes in ethical rules for medical records and how these are impacted by the POPI Act’
- Elsabé Klinck (Managing Director: Elsabé Klinck and Associates, Johannesburg, South Africa) – ‘Compensation and ethics of occupational diseases and return to work policies and strategies: the role of the DoEL and COIDA and how gaps can be addressed’
- Warren Mallon (Specialist: Occupational Hygiene and Health (Physical Stressors and OH AIAs), Department of Employment and Labour, South Africa) – ‘Interrogating the updated regulations in South Africa’
- Dr Tshgofatso Mabelane (Allergologist: ‘About Allergy’, South Africa) – ‘Occupational asthma and allergic contact dermatitis: a practical approach to managing two common occupational diseases’

Session 3, 25 August 2023: Emerging issues and hot topics in occupational health and medicine

- Dr Veruscka Leso (University of Naples Federico II, Naples, Italy, and Secretary of the ICOH Scientific Committee on Toxicology of Metals) – ‘Fast facts on nanotechnology: implications for occupational health and safety’
- Dr Amparo Benavent (OSH Unit of Healthcare, Regional Ministry of Valencia, Spain) – ‘Nursing and hazardous drugs: a gender-based approach to the conditions and consequences of their use’
- Prof. Carolyn Marie Audet (Department of Health Policy and the Institute for Global Health, Vanderbilt University Medical Center, USA) and Dr Ryan Wagner (School of Public Health, University of the Witwatersrand, South Africa, and Senior Research Fellow, South African Medical Research Council/Wits Agincourt Research Unit) – ‘Identifying and mitigating occupational health risks among traditional healers: an individually randomised controlled trial to improve personal protective equipment use among traditional healers in South Africa’

- Dr Max Lum (National Institute of Occupational Safety and Health (NIOSH), USA) – ‘Algorithms, artificial intelligence, machine learning and the future of work’

Session 4, 29 September 2023: Ergonomics and psychosocial factors in the workplace

- Prof. Stavroula Leka (Universities of Lancaster and Nottingham, UK, ICOH Board member, Past Chair of the ICOH Scientific Committee on Work Organisation and Psychosocial Factors) – ‘Psychosocial risk management and the promotion of health, safety and wellbeing in the future of work: guidance for occupational health medical practitioners (OHMPs)’
- Lyndsey Swart (Occupational Therapist: University of Pretoria, Occupational Therapy Association of South Africa (OTASA), Occupational Therapy in Occupational Health (OTOH), South

Africa) – ‘The Ergonomics Regulations and occupational health: synergising ergonomics risk assessment, medical surveillance and functional assessment of worker fitness’

- Dr Deepak Sharan (Consultant in Orthopaedic Surgery and Rehabilitation, Bangalore, India, and Chair of the ICOH Scientific Committee on Musculoskeletal Disorders) – ‘New digital tools in the assessment and management of work-related musculoskeletal disorders’
- Claudina Nogueira (ICOH Vice President for Scientific Committees, and SASOM ExCo) – ‘Update on the ICOH2024 Congress’

Statistics, regarding participants for all sessions (a total of 391), are shown in Table 1.

Table 1. Registrations, participants (391), and countries represented at the four sessions of the SASOM Annual Congress 2023

No. registrations	No. participants (attendance rate)	Countries represented by participants and presenters
<i>Session 1, 30 June 2023 – Good practice for occupational health medical practitioners (OHMPs)</i>		
161	100 (62%)	Botswana (3), Democratic Republic of the Congo (1), Eswatini (1), Lesotho (1), Mozambique (1), Namibia (5), Singapore (1 presenter), South Africa (85, including 2 presenters), The Netherlands (1 presenter), United States (1)
<i>Session 2, 28 July 2023 – Updates in legislation, compensation, and ethics in occupational health</i>		
166	110 (66%)	Angola (1), Botswana (4), Eswatini (2), Mozambique (1), Namibia (8), South Africa (94, including 4 presenters)
<i>Session 3, 25 August 2023 – Emerging issues and hot topics in occupational health and medicine</i>		
151	106 (71%)	Botswana (4), Eswatini (2), Italy (1 presenter), Mozambique (2), Namibia (4), South Africa (89, including 1 presenter), Spain (1 presenter), United States (2 presenters), Zambia (1)
<i>Session 4, 29 September 2023 – Ergonomics and psychosocial factors in the workplace</i>		
99	75 (76%)	Botswana (2), Eswatini (2), India (1 presenter), Mozambique (1), Namibia (2), South Africa (64, including 2 presenters), The Netherlands (1), United Kingdom (1 presenter), Zambia (1)



SASOM
South African Society
of Occupational Medicine
FOUNDED IN 1948

SASOM ANNUAL CONGRESS

Friday, 30 June | Friday, 28 July | Friday, 25 August | Friday 29, September

All sessions (13h00 to 17h00 SAST) – Virtual/Digital Platform

**"Occupational Health Practice in 2023
– Shining a light on the shadows of Medicine"**

30 June 2023	28 July 2023	25 August 2023	29 September 2023
Session 1: "Good practice for Occupational Health Medical Practitioners (OHMPs)" 13h00 - 17h00	Session 2: "Updates in Legislation, Compensation and Ethics in Occupational Health" 13h00 - 17h00	Session 3: "Emerging issues and hot topics in Occupational Health and Medicine" 13h00 - 17h00	Session 4: "Ergonomics and Psychosocial Factors in the Workplace" 13h00 - 17h00

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Collaboration between PHASA and SASOM: re-imagining occupational health training

On 10 September, the Public Health Association of South Africa's (PHASA's) Occupational and Environmental Health (OEH) Special Interest Group (SIG), in partnership with SASOM, hosted a hybrid workshop titled 'Bridging the gap between academia and the workplace: re-imagining occupational health training – preparedness of the occupational medicine provider to enter the working world'. The workshop was facilitated by Dr Blanche Andrews (Stellenbosch University) and formed part of the programme of the annual PHASA conference, which was held at the Boardwalk Convention Centre, Gqeberha (Port Elizabeth), from 10 to 13 September 2023.

The 2023 conference theme was *Transforming research translation: re-imagining public health evidence, policies, and practice*. The workshop aimed to explore innovations for re-invigorating occupational medicine training in South Africa and bridging the gap between training and practice to ensure that graduates are equipped with skills relevant to the working population they serve. It further aimed to stimulate a discussion around innovative ideas to 'future-proof' occupational medicine training in South Africa. The workshop commenced with an introduction to set the scene, followed by a panel presentation by national and international occupational medicine experts directly involved in occupational medicine training. The workshop ended with a facilitated discussion and consensus on future actions.

The introduction highlighted the strategic importance of South African occupational medicine training to the African continent. South Africa is strategically positioned as it is the only southern African country that offers formal occupational medicine training, locally and to the rest of southern Africa. Training programmes allow two streams of qualification: a master's degree in occupational medicine (research-based or practical MMed specialist training) or a Postgraduate Diploma in Occupational Health/Medicine (PG Dip OH/OM).

The panel session commenced with a presentation by Ass. Prof. Shahieda Adams, occupational medicine specialist at Groote Schuur Hospital and the Division of Occupational Medicine, University of Cape Town. She is also Chair of the Division of Occupational Medicine in the College of Public Health Medicine, The Colleges of Medicine of South Africa (CMSA), for the triennium ending October 2023. Prof. Adams outlined the current South African specialist training landscape, highlighting the move to workplace-based assessments and entrustable professional activities. She noted that training challenges included resource constraints, limited training platforms, and practical training exposures (including the private sector). The presentation questioned the efficient use of technology in occupational medicine specialist training, including the 'Internet of Things' and artificial intelligence (AI).

Dr Fiona Kevitt, the National Specialty Director for the Faculty of Occupational Medicine (FOM), Royal College of Physicians of Ireland (RCPI), and the Clinical Lead for the RCPI/FOM Outcomes-based Education Curriculum Revision Project, presented the Irish training experience. Key caveats from her presentation included the emphasis on practical exposure through placements in various work environments within the training programme, and the move toward an outcomes-based education model. Dr Gordon Haire, a

recently qualified occupational medicine specialist, shared his experience of moving from Ireland to Australia and applying his skills in a new environment. He noted that his training allowed him to comfortably use his skills in various contexts, including practising in a different country. He stressed the importance of mentorship and support for all new trainees, regardless of which country/jurisdiction they may have been trained in.

Dr Lanre Ogunyemi, the Immediate Past Chief Examiner for the Faculty of Occupational Medicine (FOM), United Kingdom (UK), Regional Speciality Adviser in occupational medicine for the Trent Region, and Deputy Chief Examiner for the Faculty of Occupational Medicine (FOM), Royal College of Physicians, Ireland, presented the UK perspective. Occupational medicine trainees in the UK can follow a formal or informal route to specialisation. The formal route involves a structured four-year programme. The key components of the 2022 revision of the occupational medicine curriculum were outlined. Learning outcomes included areas related to professionalism, research, clinical practice, workplace risk, worker safety, education and training, and leadership.

Dr Frederick Weinand, an occupational medicine specialist in the Ministry of Health, Tanzania, with international training completed in the UK and South Africa, presented the PG Dip OH/OM training. He compared the traditional in-person modular training structures to a hybrid approach to training, incorporating distance learning. Benefits of a hybrid training approach include continuous training and online support for the course duration, access to a diverse pool of lecturers, as the constraints associated with travelling and busy schedules are mitigated, and ring-fencing contact time for practical worksite visits and training. Dr Weinand presented future recommendations for the PG Dip OH/OM training, including agreed-upon learning competencies across diploma programmes for greater standardisation, centralised training and assessment through the CMSA, and collaboration across universities, including curriculum review. He also emphasised the need for international collaboration and an Occupational Medicine Centre of Excellence. He envisioned that this Centre of Excellence would accommodate South African and regional African training needs, establish a mentorship programme, and clearly delineate the scope of practice of occupational health nurse practitioners, occupational medicine practitioners, and occupational medicine specialists.

The introduction and panel presentation were insightful and thought provoking, and laid the foundation for a robust discussion. Due to time constraints, it was agreed by those in attendance that further stakeholder engagement was required to comprehensively plan for the future of occupational medicine training and practice in South Africa and the broader geographic region. A consolidated position statement incorporating the aims and consensus of the workshop was seen as a stepping-stone to begin the process of re-imagining and innovating the training of occupational medicine service providers.

A common, shared vision and unified action are needed. To quote an African proverb, "If you want to go quickly, go alone. If you want to go far, go together". The innovative transformation of occupational medicine training will require all relevant stakeholders, including but not limited to academia, industry, and graduates, to collaborate in charting a way forward.

The Public Health Association of South Africa Occupational and Environmental Health Special Interest Group (PHASA OEH SIG) welcomes further comment on this topic:

- Dr Blanche Andrews, Division of Health Systems and Public Health, Stellenbosch University, e-mail: bandrews@sun.ac.za
- Dr Sujatha Hariparsad, Discipline of Occupational and Environmental Health, School of Nursing and Public Health, University of KwaZulu-Natal, e-mail: HariparsadS1@ukzn.ac.za
- Dr Itumeleng Ntatamala, Occupational Medicine Division, School of Public Health, University of Cape Town, e-mail: itumeleng.ntatamala@uct.ac.za

SASOM Western Cape Chapter webinar

The SASOM Western Cape Chapter organised a webinar on AI in healthcare on 10 October 2023, hosted by the SASOM National Office on its Zoom platform. Two presentations were delivered in the webinar:

- Ass. Prof. Mark Sujan (Chartered Ergonomist and Human Factors Specialist, University of Warwick, UK) – ‘Deploying AI in healthcare environments: lessons learnt’
- Dr Muzzammil Ismail (Public Health Medicine Specialist, Western Cape Department of Health, South Africa) – ‘AI-enabled occupational and public health: an important chat’

SASOM ExCo and Annual General Meetings – November 2023

SASOM held its last ExCo meeting of the year on 13 November 2023, fully virtually. Its annual general meeting (AGM) took place on 17 November 2023, as an associated meeting of the 7th International Conference on the History of Occupational and Environmental Health (organised by the ICOH Scientific Committee on History of Prevention of Occupational and Environmental Diseases), held in Durban, South Africa, from 15 to 17 November

2023. SASOM was represented on the organising committee of the conference, and members chaired sessions and delivered oral and poster presentations. SASOM took the opportunity to market ICOH at the conference and promote the benefits for occupational health practitioners in becoming ICOH members. To this end, SASOM designed a flyer with ICOH information for conference attendees, and hardcopies of ICOH membership forms were available for those interested in applying for ICOH membership. Feedback on the AGM and the history conference will be published in the SASOM newsletter of the first issue of *Occupational Health Southern Africa*, 2024.

Season's greetings

SASOM takes the opportunity of the festive season spirit to congratulate the Executive Director of the National Institute for Occupational Health (NIOH) in Johannesburg on being awarded an adjunct professorship by the University of the Witwatersrand, South Africa. Congratulations and many celebrations, Prof. Spo Kgalamono – Chair of Occupational Health, SASOM ExCo member, and long-time friend! SASOM is very proud of your academic achievements and valuable contributions to occupational health over many years!

The SASOM National Office will close for the end-of-year festive season on 14 December 2023, and re-open on 8 January 2024.

‘Tis the season to be not only merry, but also grateful, mindful, hopeful, and reflective of the past year. SASOM wishes all its members, their families and friends, and their communities a peaceful, healthy, and safe festive season, filled with many blessings. May 2024 bring us all peace of mind, kind hearts, contented spirits, and many successes and rewards in all facets of life. SASOM will continue supporting its members in ‘all-things-occupational-health-and-medicine’ and is pleased to continue supporting *Occupational Health Southern Africa*, which it considers to be a rich regional resource in occupational health. 📌



Image: courtesy of SASOM

SAIOH news

As part of our service to members, in this newsletter we provide feedback on the latest developments within the Southern African Institute for Occupational Hygiene (SAIOH). SAIOH exists for its members and is reliant on them to continue to serve this noble profession ethically. Therefore, we invite your inputs and feedback on any matters communicated below.

PRESIDENT'S ADDRESS

Naadiya Mundy: SAIOH President

e-mail: president@saioh.co.za



Naadiya Mundy

Photograph: courtesy of SAIOH

Work environments: harmonising ethics and occupational hygiene

In the rapidly evolving contemporary work landscape, characterised by technological advancements, globalisation, and evolving work paradigms, fostering a workplace that is both safe and ethically responsible is critical. Honesty, transparency and integrity should be deeply ingrained in organisational policies, decision-making processes, and employee behaviour. These principles promote a positive work culture.

Employees often look up to their leaders as role models; ethical leadership both influences employee behaviour and contributes to increased trust and cohesion within the organisation.

Occupational hygiene professionals play a vital role in the responsible use of technology. Safeguarding data privacy, ensuring fairness in artificial intelligence (AI) algorithms, and promoting responsible digital behaviour are imperative for maintaining ethical standards and employee trust.

A healthy workforce is a productive workforce. Acknowledging the importance of mental health, workplaces must implement strategies to reduce stigma, offer mental health resources, and cultivate a supportive work environment. Addressing stress, anxiety, and other mental health issues is essential for employee wellbeing and organisational productivity.

Remote work has become common since the COVID-19 pandemic. Employers should provide guidance on setting up workspaces, emphasising ergonomics, and encouraging regular breaks to mitigate any potential health risks associated with remote work.

Effectively managing occupational stress in the workplace is important as it can have detrimental effects on employee health, morale, and productivity. Employers should develop stress management programmes, encourage regular breaks, and provide access to stress-relieving activities to mitigate the adverse effects of stress on employee health and wellbeing.

Further reading

1. Iavicoli S, Valenti A, Gagliardi D, Rantanen J. Ethics and occupational health in the contemporary world of work. *Int J Environ Res Public Health*. 2018; 15(8):1713. doi: 10.3390/ijerph15081713.
2. Evans GS, Kloke H, Jahn S. Review of ethics for occupational hygiene hazard monitoring surveys using sensors. *J Occupational and Environmental Hygiene*, 2023; 20(10):439-451. doi: 10.1080/15459624.2023.2247018.

NATIONAL COUNCIL FEEDBACK

Naadiya Mundy: SAIOH President

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Deon Jansen van Vuuren: SAIOH General Manager

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Strategic plan and objectives

The targets within SAIOH's continuously evolving five-year strategy are consistently being met by our diligent Management Board. A signed-off strategy plan was circulated to all our members and launched at the annual general meeting (AGM) in October.

Ethics

SAIOH's Memorandum of Incorporation (MoI) is in the concluding stages of approval and was disclosed to SAIOH members during the AGM, where it was accepted.

SAIOH branch activities

The Western Cape branch hosted its second in-person meeting on 9 June 2023. Johan Coetzé discussed the use and application of Bayesian statistics in occupational hygiene. The Mpumalanga branch convened its second hybrid branch meeting on 11 August 2023 at Seritiza Coal in Middelburg. There were two presentations by personal protective equipment (PPE) providers and one by Trysome, regarding new technology to control indoor air quality (IAQ) in heavy-duty mining vehicle cabins. The KwaZulu-Natal branch hosted its second hybrid meeting on 31 August 2023. Prof. Jerome Lavoue (University of Montreal, Canada) spoke about industrial hygiene statistics and the use of ExpoStats for analysing occupational hygiene data.

SAIOH Annual Scientific Conference 2023

The hybrid 2023 SAIOH Annual Scientific Conference, which took place from 23 to 26 October this year, paired with the International Occupational Hygiene Association (IOHA) meeting, was a resounding success. A record number of SAIOH members attended, as follows:

- Five Professional Development Courses: 199 attendees (93 in person and 106 online)
- The two-day conference had 203 attendees per day (in total: 300 in person and 106 online)
- A total of 605 attendees (393 in person, and 212 online)

The Gala and awards evening, held under an elegantly decorated marquee, was a night to be remembered. We are pleased to announce that the Botswana Association of Occupational Hygiene (BAOH) will host the 2024 SAIOH Annual Scientific Conference.



Image: courtesy of SAIOH

International feedback

The SAIOH Professional Certification Committee (PCC) nominated Deon Jansen van Vuuren as the interim caretaker representative on the IOHA Board and the National Accreditation Recognition Committee (NARC). The nomination was approved by the SAIOH Management Board and the IOHA President was informed of this change.

The IOHA Board of Directors held its autumn meeting and AGM in Cape Town, hosted by SAIOH, on 22 October 2023. This coincided with the SAIOH 2023 conference.

Sad news

PC (Schu) Schutte died on 28 September 2023 after a short illness. Schu was a world-renowned researcher who specialised in heat stress management, acclimatisation, ergonomics, and fatigue management. Schu worked at the Chamber of Mines Research Organisation (COMRO), which later changed its name to the Council for Scientific and Industrial Research (CSIR) MiningTek, until his retirement. Although retired when he took ill, he was still actively involved in occupational hygiene, and assisting SAIOH and the mining industry in these fields of speciality.

SAIOH Technical Committee feedback

The SAIOH Technical Committee's research, pertaining to the measurement and the analyses of welding fumes, is in limbo. A sub-committee is being formed by SAIOH and the Occupational Hygiene Accredited Inspection Authorities (OH AIA) Association, to develop a position paper on this matter.

Our second technical committee has started developing technical procedures and a SAIOH position paper on heat stress management. A follow-up meeting took place in March 2023 and, on 31 July 2023, Schu Schutte (ex-Miningtek) presented a hybrid workshop on heat stress management. This joint mini conference, held

at the Council of Scientific and Industrial Research's International Conference Centre (CSIR ICC), was attended by 187 SAIOH members – in person and online.

The Council Technical Co-ordinator, Wessel van Wyk, is finalising a position paper on real-time monitoring. As soon as this is approved by a sub-committee of the SAIOH PCC Executive Committee, it will be circulated to all SAIOH members and stakeholders.

Communications

SAIOH continues to communicate daily with its members and stakeholders, using various platforms.

FROM THE PROFESSIONAL CERTIFICATION COMMITTEE (PCC)

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Certification assessments

A summary of results from the March to September 2023 assessments is provided in Table 1.

The third quarter (Q3) PCC written assessments took place on 15 September 2023; virtual oral assessments were conducted from 13 October 2023 and concluded in November 2023.

PCC assessment improvements


The PCC technical teams continue to revise the PCC oral assessment format and questions in line with the occupational hygiene self-assessment tool; 14 of the 17 occupational hygiene modules have been completed.

Table 1. SAIOH PCC certification assessment results (November 2023)

Certification category	Written assessments (March–September) Q1, Q2, Q3				Oral assessments (March–November) Q1, Q2			
	Assessed	Passed	Failed	Pass rate	Assessed	Passed	Failed	Pass rate
	n	n	n	%	n	n	n	%
OH assistant	138	131	7	94.9	138	131	7	94.9
OH technologist	69	42	27	60.9	52	27	25	51.9
Occupational hygienist	48	29	19	60.4	40	28	12	70.0
Total	255	202	53	79.2	230	186	44	80.9

Two PCC technical teams are working in parallel. The first is updating the SAIOH self-assessment tool and revising the PCC oral assessment format, and the second is developing questions and the required answers. Improvements in the assessment format will ensure that the growth in the field of occupational hygiene is covered and that the assessment format and tools are relevant and current. The PCC Chief Examiner is improving the application and written assessment formats.

Occupational Hygiene Skills Forum (OHSF)

The OHSF was instrumental in coordinating the development of a series of asbestos training courses. The most recent, 'Asbestos Assessments in Buildings, Section 1: Introduction' is now available for use by OHSF-registered training providers. The assessments are administered by SAIOH for a fee per candidate. Please contact Lee Doolan for more information (lee@saioh.co.za). 


SAIOH invited to SASOHN conference

The Southern African Institute for Occupational Hygiene (SAIOH) received an invitation to attend the 42nd South African Society of Occupational Health Nursing Practitioners (SASOHN) Conference, held at the Emperors Palace Convention Centre on 22–24 November 2023.

Karen du Preez, SAIOH Vice-President, attended the full-day conference programme on 23 November 2023.

The theme of the conference was *Orchestrating the best OHS team* and compared the elements of an occupational health and safety (OHS) programme and the stakeholders involved in OHS services, to instruments that form part of a symphony orchestra.

It emphasised the importance of collaboration and team-work to produce the 'symphony' of protecting the health and wellbeing of employees.

Congratulations to SASOHN President Michelle Bester and her team on a successful conference and thank you for inviting SAIOH. 



SAIOH Vice-President, Karen du Preez (right), with SASOHN President, Michelle Bester (left), at the 2023 SASOHN Conference

Photograph: courtesy of SAIOH

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With over 28 years' experience, we provide industry-leading **occupational health solutions** including **medical surveillance** and **primary care** to enhance your business' financial health. We have the expertise to engage and guide your business, to successfully integrate your workplace wellness requirements by making sure of the following:



Risk insights and management are reported



Employees are declared fit for duty through a medical



All occupational health legal requirements are met successfully



Early risk identification and management measures are put in place



Mobile and walk-in clinics, where medical surveillance is provided, are present



Injury-on-duty and COID claims are effectively managed



Chronic conditions are monitored

Powerful private sector partnerships

Tshepo Sedibe: De Beers Group

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INTRODUCTION

As part of the De Beers Group of companies, Venetia Mine partnered with the AfroCentric Group and South African Business Coalition on Health and AIDS (SABCOHA) towards the community health wellness campaign at Musina and Blouberg communities. The investment is in line with the Building Forever (BF) pillar for Partnering for Thriving Communities and, in particular, De Beers' health and wellbeing stretch goal, which aims at the reduction of HIV and TB infection rates, child and maternal mortality, the incidence of gender-based violence, and road accidents.

AfroCentric contributes funding to the SABCOHA community fund and is committed to strengthening the partnership approach and contributing to the sustainability of the programme. AfroCentric Employee Health Solutions (formerly Fastpulse) provided project management, clinical and technical oversight and, together with De Beers and SABCOHA, ensured overall oversight and achievement of all project goals.

Health testing services (HTSs) and wellness screening access points were deployed within the areas in Blouberg, Alldays, and Musina over a period of six months. HTSs for 25 000 individuals included HIV counselling and testing, and screening for tuberculosis (TB), sexually transmitted infections (STIs), blood pressure,

glucose, body mass index (BMI), and vision. The wellness screenings support Government's Checka Impilo campaign – an accelerated national wellness campaign that focuses on testing and treating people for the human immunodeficient virus (HIV), TB, STIs, and non-communicable diseases such as hypertension and diabetes. To date, De Beers and AfroCentric have contributed more than R10 million towards the campaign.

LAUNCHING OF THE COMMUNITY WELLNESS DAY AT MUSINA

On 8 September 2023, the Community Wellness Day was launched at Musina, bringing together various stakeholders. The day formed part of a campaign launched in January by De Beers and AfroCentric to fund wellness screenings of more than 25 000 community members in the labour-sending areas surrounding Venetia mine, in the Vhembe and Capricorn districts of Limpopo province. The Community Wellness Day was attended by the Minister of Health, Honorable Dr Joe Phaahla; Vhembe District Executive Mayor, Dowelani Nenguda; Musina Local Municipality Executive Mayor, Godfrey Mawela; Deputy Chairperson of the Private Sector Forum, Dr Tshegofatso Gopane; Chairperson of the South African Business Coalition on Health and AIDS, Dr Thuthula Balfour (who is also



Stakeholders at the Community Wellness Day launched at Musina, 8 September 2023

Photograph: courtesy of MMPA

Head of Health at the Minerals Council); South African National AIDS Council (SANAC) CEO, Dr Thembi Xulu; Deputy Chairperson of SANAC, Steve Letsike; members of civil society, organised labour, traditional healers, faith-based organisations, management of Venetia Mine; and the AfroCentric group.

At the Wellness Day launch, various services were offered, such as health testing, registration of social grants and identification documents, highlighting the importance of integrating service delivery. The Minister of Health reiterated the importance of public-private partnerships in responding to the scourge of non-communicable diseases that is ravishing our communities. The Senior General Manager of Venetia, Ntokozo Ngema, committed to further investment in the communities around Venetia Mine.

The wellness screening campaign aligns with the United Nations Sustainable Development Goals (SDGs), the health objectives outlined in South Africa's National Development Plan (NDP), and the National Strategic Plan (NSP) on HIV/AIDS, STIs, and TB.

De Beers is also focusing on road safety as it transports its workforce to and from the mine. Road safety forms part of SDG 3, which is part of the Building Forever pillar for Partnering for Thriving Communities. De Beers has invested in a project to improve road safety in partnership with the Department of Transport on routes associated with its labour-sending areas, and strategic roads around the special economic zone in Musina.

De Beers has also established a programme called Living with Dignity to address gender-based violence.

RESULTS OF THE PROJECT

HIV

A total of 25 198 community members (50% male and 50% female) participated in HIV counselling. The majority (69%) of the participants were black and aged 25-49 years. Of the individuals who participated in HIV counselling, 24 570 participated in HIV testing (97.5% uptake), 2.4% declined testing due to known positive status, and 0.1% (with unknown status) declined HIV testing. Most of the individuals who participated in HIV testing, tested negative (99.4%).

Tuberculosis

- A total of 25 198 community members were screened for pulmonary TB.
- Thirteen participants were found to be on TB treatment.
- Forty-three participants had symptoms suggestive of TB and were referred to the local hospital for further investigation; all tested negative for TB.

Sexually transmitted infections

A total of 25 198 community members were screened for STIs; 57 (0.2%) had symptoms and were referred to local healthcare facilities for treatment.

Non-communicable diseases

Almost two-thirds (62%) of the participants had high BMIs, 9% had elevated blood pressure, and 3% had elevated blood glucose levels. Those with high BMIs were given health education and advised to see dietitians, while those with abnormal blood pressure and/or blood glucose were referred to the local hospital for treatment.

RECOMMENDATIONS

- The private sector needs to show commitment towards the implementation of the NSP 2023–2028.
- The AfroCentric and De Beers partnership initiative needs to be replicated across all provinces in South Africa.
- Partnerships with the Department of Health should be improved to ensure treatment initiation of all individuals screened and found at risk of ill health.
- Coordination between Government, private sector, and civil society is vital for successful health and safety initiatives.
- The high prevalence of obesity in our communities needs an integrated response between stakeholders.
- Integrating community health as part of the health strategy of organisations is needed to address the social determinants of health. 