EASOM BULLETIN

27TH EDITION

DECEMBER

2025

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For comments and questions about this Bulletin, contributions and suggestions for the next Bulletin, please send an e-mail to***: popescu.florina@umft.ro***

Editorial of the President

Challenging Times also for Occupational Health

Begoña Martínez-Jarreta

Dear members of EASOM,
Dear friends,

We find ourselves at a particularly intricate moment, shaped by geopolitical instability, the transformation and digitalisation of workplaces and a profound reconfiguration of work both in Europe and globally.

In this context, Occupational Medicine and Occupational Health are called upon to engage actively in public and scientific debate, to ensure the meaningful transfer of knowledge and to help guide responses grounded in evidence and informed anticipation.

Our discipline must also foster in our residents the skills and competencies required to navigate these evolving landscapes and to ensure the effective transfer of knowledge within workplaces and, when appropriate, to policymakers.

Structural challenges repeatedly identified over the past two decades persist, including the shortage of specialists and the need to strengthen formal training in our discipline, which is essential for meeting the emerging needs of health systems and organisations.

Traditional concerns also remain, such as the underreporting of occupational diseases and the need to reinforce epidemiological surveillance systems, both crucial for informing effective preventive policies and supporting evidence-based decision-making. Equitable access to preventive services for the entire working population likewise remains a cornerstone for safeguarding occupational health and protecting workers' rights.

To these longstanding issues, new and increasingly complex risks must be added. Among them are those arising from the expansion of algorithmic management systems and the intensive digitalisation of workplaces, developments that may exert significant effects on the mental workload, autonomy and psychosocial conditions across many sectors. Recent evidence suggests that such models may intensify work demands, diminish available resources for coping with them and generate imbalances with direct implications for workers' health and wellbeing. These dynamics, far from being abstract, have already become part of everyday organisational life and call for a coherent, coordinated and technically robust response.

Against this backdrop, our scientific society has pursued an active and forward-looking agenda. Over the past year, we have laid the foundations for closer collaboration with several scientific societies, creating forums that enrich our collective perspective and strengthen our capacity for influence. These synergies broaden the interdisciplinary outlook vital to our field and support the development of collaborative initiatives that reinforce our mission and institutional role.

We have also welcomed new members to EASOM, with additional applications under review, reflecting the growing dynamism of our discipline. These applications will be submitted for final approval at the forthcoming General Assembly, where we look forward to formally welcoming our new colleagues and presenting ongoing collaboration agreements for endorsement.

A highlight of this year's activities has once again been the organisation of the EASOM Summer School, held online in 2025 under the direction of Professor Milan Milosevic and with the participation of Professor Hana Brborović and Dr. Roko Zaja, all from from the University of Zagreb, School of Medicine and Andrija Stampar from the School of Public Health.

Although the virtual format is not ideal, this edition confirmed its academic strength and practical value. It enabled broad and diverse participation (with more than 100 registered online attendees), facilitated access for professionals from different countries and for colleagues who, for various reasons, cannot travel on the usual dates of our Summer Schools, and allowed for an agile and engaging examination of a topic of wide and current relevance. Participants expressed strong appreciation for the quality of the speakers, the active involvement of Occupational Medicine residents and the comprehensive review of the interface between AI, digitalisation and health at work.

A thematic issue of the journal Sigurnost / Safety, dedicated to the EASOM 2025 Summer School, is currently in preparation. Professor Hana Brborović, a member of the 2025 Summer School organising team, serves as editor of this journal.

In these uncertain times, Occupational Medicine provides an essential lens, bringing together scientific evidence, prevention and a strong sense of social responsibility.

This Annual Bulletin reflects part of the work carried out by our society in 2025 and complements the information shared with EASOM members in recent months, given the impossibility of holding a General Assembly during the online Summer School.

In recent years, we have also faced particularly demanding circumstances, including the Covid-19 pandemic, which tested our capacity for adaptation as a scientific society and our commitment to sustaining the mission that defines us.

Today, amid a global context marked by armed conflicts, geopolitical tensions and profound transformations in workplaces, our professional community continues to advance with determination.

I would like to express my sincere appreciation to the members of the EASOM Board for their continued dedication and support throughout the year. Their commitment has been essential to the progress of all our activities.

My recognition also extends to all EASOM members. Through your work as occupational physicians, educators and researchers, you contribute to building safer, healthier and more sustainable workplaces across Europe. Our collective commitment, and the fact that we work together within EASOM, continues to strengthen both the present and the future of our discipline.

We look forward to meeting again at the 2026 Summer School, which will take place from 27 to 29 August at Ghent University and will be organised by our colleague, also friend, and senior EASOM member, Professor Lutgart Braeckman, together with her team. We are further exploring the possibility of holding a joint online satellite session with EPICOH during the School. EPICOH's 2026 Congress will be held in Sweden on dates close to ours (one of them coinciding) and will be organised by the Karolinska Institute, with whom we are currently engaged in constructive discussions regarding this potential collaboration.

Until then, we remain in contact.

May 2026 bring health, serenity and new opportunities, and may we continue to meet and work together, united by our shared vocation and by our deep commitment to strengthening Occupational Medicine across Europe.

Merry Christmas and a Happy New Year!

Begoña Martínez-Jarreta

President of EASOM

Report on the 24th EASOM Summer School ONLINE – Zagreb, Croatia

28 – 29 August 2025

Artificial Intelligence and Occupational Medicine: Challenges, Opportunities and the Road Ahead

By Milan Milošević, Hana Brbrović, Roko Žaja

Introduction

The EASOM Summer School 2025 brought together international experts to examine how artificial intelligence (AI) is transforming clinical practice, risk assessment, education and workplace safety management in occupational health. AI technologies offer substantial opportunities to enhance system efficiency, reduce administrative burdens, broaden training methods and enable real-time worker monitoring. When responsibly implemented, these tools foster safer workplaces and strengthen occupational health systems.

AI Applications in Occupational Medicine

AI is fundamentally reshaping occupational medicine through automation, smart monitoring, extended reality training, algorithmic management and new work arrangements. Machine-based systems that generate predictions, decisions and content with varying degrees of autonomy are already preventing work-related accidents and diseases while augmenting clinical and preventive work. Automation and advanced robotics remove workers from hazardous "3D jobs" (dirty,

dangerous, dull), reducing physical strain through exoskeletons and assistive systems. Smart occupational safety tools integrate environmental sensors, wearables and AI analytics for real-time alerts and evidence-based interventions addressing chemical, physical, biological and ergonomic risks. Extended and virtual reality technologies strengthen training for high-risk scenarios and aid hazard identification. Algorithmic management can optimize scheduling and support skills development, while digitalised work arrangements improve flexibility but require management of ergonomic and psychosocial risks. AI supports early diagnosis through systems like noise-related hearing loss risk assessment, which provides continuous exposure monitoring and predictive surveillance to identify at-risk workers. Applications extend to diagnostics, fitness-for-work assessments, return-to-work planning, and training programmes, aligning with emerging concepts of "precision occupational medicine."

Smart Digital Systems and Risk Management

Modern AI applications rest on smart digital systems that collect, analyze and use data to identify risks and promote worker safety. These systems encompass sensors, smart personal protective equipment, wearables, software platforms and analytics dashboards. European Survey data reveal extensive workplace digitalisation though adoption of sophisticated systems such as wearable sensors remained limited at approximately 4.8% in 2019, concentrated in larger organizations. Smart digital systems operate in two fundamental modes: proactive systems provide real-time risk identification and predictive insights to prevent incidents before they occur, while reactive systems focus on emergency response and accident investigation. Modern trends increasingly emphasize proactive approaches integrated within comprehensive occupational health management systems.

Practical Applications

Hand-Arm Vibration Syndrome monitoring systems link vibration profiles with wrist-worn sensors to warn workers of exposure thresholds. Connected multi-gas detection systems integrate wearable sensors with cloud dashboards for real-time alarms and compliance tracking. Augmented reality smart glasses support remote audits with reduced on-site personnel. Posture monitoring wearables provide biofeedback and task-level prevention interventions. Healthcare worker violence risk assessment in Sicily demonstrated the AI's capacity to identify patterns not apparent through traditional methods, enabling proactive protection for vulnerable staff. A GPT model for safety data sheet recognition achieved approximately 84% accuracy, emphasizing that current AI technology supports large-scale data processing but requires human validation.

Risks and Governance

Smart digital systems introduce data quality concerns - information can be inaccurate or repurposed away from prevention aims. New hazards include device

malfunctions, cyberattacks, and overreliance that displaces collective safety controls. Psychosocial stressors may arise from continuous monitoring, frequent alarms, or inadequate training. Implementation principles must address these risks through comprehensive governance frameworks emphasizing early worker involvement, clearly defined purpose, integration with existing infrastructure and cooperation with manufacturers. Privacy by design approaches center on anonymization, data minimization, regulatory compliance, and cybersecurity, with role-restricted access where necessary. Human-robot interaction and poorly designed devices introduce physical and ergonomic hazards. Algorithmic management may lead to work intensification, stress, invasive surveillance and loss of autonomy - ethical concerns that persist despite regulatory efforts including the European AI Act and GDPR. A central issue is professional responsibility: professionals must anticipate AI risks, critically supervise outcomes and recognize limitations.

AI in Medical Education

The summer school examined AI's transformative role in occupational medicine education. Presentations emphasized the shift from teacher-centered to student-centered learning approaches, with flipped classroom models and clearly defined learning outcomes. Practical demonstrations showed how AI tools can rapidly create educational content - transforming textbook chapters into online courses with podcasts, videos and quizzes in under 20 minutes using platforms including Google Classroom, Notebook LM and YouTube. However, concerns about intellectual property and fair educator compensation were raised, with consensus that AI should support rather than replace human educators. Virtual patient simulations and real-time feedback systems demonstrated AI's educational impact. A European project integrating digital health tools into clinical reasoning illustrated collaborative approaches to developing AI literacy among healthcare professionals. The importance of maintaining high educational standards and proper source citation was emphasized throughout.

AI in Research and Information Literacy

Presentations focused on utilizing AI in literature searches, data analysis and scientific writing while emphasizing critical evaluation. Researchers must choose appropriate databases, construct effective search queries and disclose AI use. The AI's potential for generating false references underscores the importance of information literacy and fact-checking. One instructive case involved a medical research article rejected due to undisclosed AI usage and lack of patient consent, highlighting the critical importance of ethical transparency and regulatory compliance in medical research. Comprehensive overviews addressed machine learning, deep learning and their applications in diagnostics and occupational health monitoring, emphasizing the growing importance of explainable AI in building clinical trust. Presentations also highlighted semantic search engines'

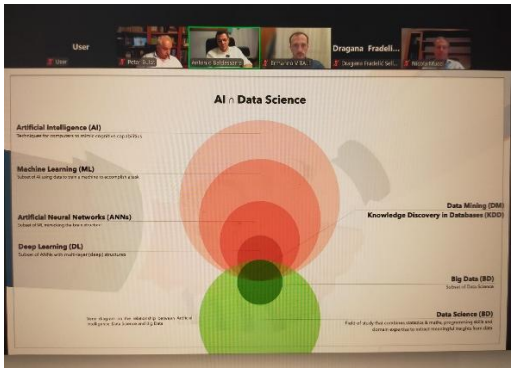
superiority over keyword-based approaches and the AI's potential in personalized medicine.

Specialized Applications and Future Directions

The AI applications in ophthalmology and telemedicine demonstrated potential in diagnosing occupational eye health issues, with computer vision systems assessing workplace eye strain and early detection systems for chronic diseases affecting worker fitness. The importance of device connectivity for comprehensive monitoring was emphasized, along with the AI's transformative impact on curriculum design, particularly in online medical education.

Recommendations and Conclusion

The summer school concluded that AI offers unprecedented opportunities for enhancing worker protection through proactive monitoring and predictive analytics. However, successful implementation requires careful attention to ethical considerations, data privacy, worker participation, and human-centered approaches that complement rather than replace traditional occupational safety measures. Key recommendations include prioritizing risk reduction at source, using AI to complement rather than replace clinical judgment, building transparent worker-involved governance structures, implementing phased pilot programs with measurable outcomes and ensuring interoperability while maintaining clinical oversight. Transparent use and clear distinction between performance management and occupational safety monitoring are essential to maintain worker trust and engagement. The AI's environmental footprint combined with risks of work intensification, surveillance-related stress and algorithmic bias demands dynamic regulatory frameworks and international cooperation. Occupational medicine professionals require new competencies in digital literacy, algorithmic critical thinking and applied ethics while maintaining essential human qualities - empathy, compassion and professional judgment. EASOM reaffirms its commitment to fostering innovative, human-centered occupational medicine that embraces digitalisation while remaining true to its fundamental mission: protecting workers' health, dignity and wellbeing. Future directions must emphasize evidence-based validation, transparent governance, comprehensive stakeholder engagement and educational initiatives preparing professionals for AI-enhanced practice.



25th EASOM Summer School in Ghent, Belgium, 27–29 August 2026 – First Announcement

The proposed topic is "(Neuro)diversity at the workplace".

By Lutgart Braeckman

What is it about?

Diversity in the workplace refers to the presence of employees from a wide range of backgrounds, ethnicities, cultures, ages, genders, abilities and other characteristics within an organization.
'Neurodiversity' is a way of saying everyone's brain is different. A neurodiversity approach views autism and other forms of 'neurodivergence' – e.g. ADHD, learning difficulties - as natural variations in people and not as "abnormal".

Why it this important (to teach)?

Workplace diversity creates a dynamic and inclusive environment. Promoting workplace diversity provides a space where everyone feels valued and respected for the viewpoints, ideas, perspectives and experiences they bring. It creates a sense of belonging that makes people want to stay, contribute, and enjoy showing up to work.

Inclusion enhances well-being and motivation, reduces work-related stress and lowers absenteeism and staff turnover, thereby promoting greater stability and continuity of talent. It also encourages more open and constructive communication, improving coordination and effectiveness in day-to-day work.

From a productivity perspective, inclusive environments enable organisations to fully harness the diversity of skills, experiences and perspectives particularly when supported by a climate of psychological safety. This leads to better decision-making processes, increased innovation and more effective resolution of complex problems. Individuals show higher levels of engagement and perform better when they know their contributions are valued.

Implementing diversity initiatives can present various challenges, including resistance to change, mis-communication and insufficient leadership support. It is important that healthcare professionals and managers understand the different types of diversity in the workplace as some characteristics, such as race, gender and religion, are protected by law.

The occupational physician can be the central point of contact, as he or she acts as the link with all parties involved. They are familiar with the workplace and can consult with the company's HR department, employees and trade union to promote diversity and facilitate inclusion at work.

How to equip students with appropriate knowledge and skills to deal with diversity challenges?

Medical education can contribute to better care and inclusion by developing, implementing and evaluating the curricula on cultural, linguistic and ability differences in healthcare.

The faculty of medicine and health sciences in Ghent is putting diversity consciousness into (Teaching) Practice. Come and join the discussion about a diversity-conscious approach, in which diversity is seen as enriching the learning process for all students.

Training occupational physicians in these competencies will ensure that our workforce is representative of our society and that our working environment is inclusive and will enable every person to use their full potential.

We look forward to welcoming you to Ghent!

Collaboration with other Societies

Report on the 2025 Edition of the European Postgraduate Assessment in Occupational Medicine

By Fabriziomaria Gobba

Some weeks ago, on 20 October, the 2025 edition of the European Postgraduate Assessment in Occupational Medicine was held in Brussels, at the Domus Medica Europaea. The Assessment, which is organized to release the European Diploma in Occupational Medicine, reached its 6th edition this year. Organized according to the procedures provided by the Council for European Specialist Medical Assessments (CESMA), the examination is aimed to assess the consistency of the Occupational Medicine (OM) specialist competence with an adequately high and updated European standard, established with the aim to advance and harmonize the competence of the OM specialists across Europe. Even if the European Diploma in Occupational Medicine, in principle, cannot be assumed as a license to practice in the EU countries, as only the National Competent Authorities have the role to provide such a license, for sure it is at least an important quality curriculum mark, complementary to the national examinations.

The European Postgraduate Assessment in Occupational Medicine, held annually, consists of a 130-item Multiple Choice Questions (MCQs) of different levels of difficulty (easy, moderate, difficult) to be completed in 150 minutes. The competences assessed in the examination are described in the Occupational Medicine European Training Requirements (OM-ETRs), a document detailing the aspects of training to be covered for an adequately high European standard of OM specialists. The organization of the European Postgraduate Assessment in Occupational Medicine was the result of the activity of a committee of experts composed of a core group of medical specialists with clinical expertise as well as expertise in educational and assessment aspects, of the UEMS Occupational Medicine Section, with the collaboration of the European Association of Schools in Occupational Medicine (EASOM).

This year the European Postgraduate Assessment in Occupational Medicine underwent a CESMA appraisal: Danny Mathysen and Maeve Durkan (CESMA President) evaluated all the procedures for the organization of the exam, participated in the Brussels exam and audited the examiners and the participants.

The final results of the appraisal are not yet available, but preliminary discussions with the CESMA appraisers allow us to be confident of a positive outcome.

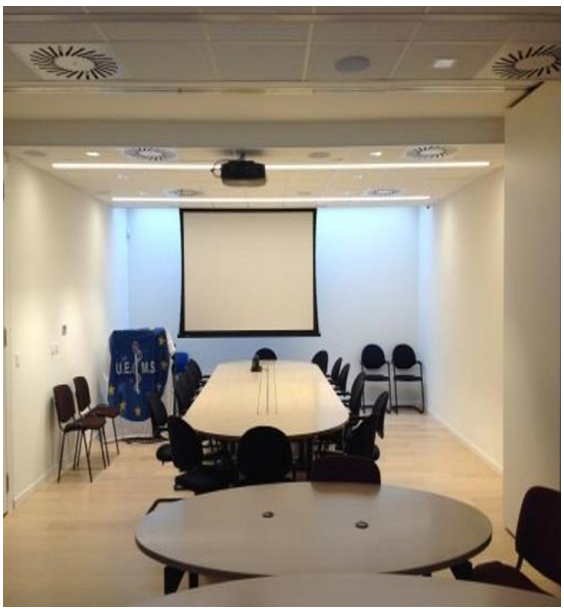
The UEMS Office in Brussels provided all the necessary equipment for the Assessment as well as an active support to ensure the smooth running of the examination.

Nine applicants from different European countries (Croatia, Germany, Ireland and Slovenia), representing a wide age range, took part in the 2025 edition. All candidates passed the Assessment, thereby qualifying for the European Diploma in Occupational Medicine and, accordingly, are entitled to use the title "Fellow of the European Board in Occupational Medicine."

Candidate feedback on the Assessment was highly positive: participants expressed strong satisfaction with the organisation of the exam, the adequacy of the allotted time, the distribution of MCQ difficulty levels, the alignment with the ETRs, with the technical information and venue.

The promotion of the 2025 European Postgraduate Assessment in Occupational Medicine took place via multiple channels, including the websites of UEMS and EASOM, national activities of section members and through the participation of the UEMS OM President in various meetings and webinars. Most candidates reported receiving information through their national representatives.

Given the positive results and the high level of candidate satisfaction, the 2025 edition of the Assessment represents another important milestone in promoting Occupational Medicine as a high-level specialty in Europe. The organization of the 7th edition, which will take place in October 2026, is already underway.



A request from the Editor in Chief of EASOM:

Members are requested to provide us with their teaching experiences or news.

The EASOM Bulletin is a good place to share these experiences, as well as the EASOM website.

Please send your contributions to:

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Merry
Christmas !

Happy New Year !