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Société Suisse de Médecine d'Urgence et de Sauvetage
Società Svizzera di Medicina d'Urgenza e di Salvataggio
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SWISS CONGRESS OF EMERGENCY MEDICINE

FRIBOURG, MAY 28/29, 2026

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POSTERS

P1

Wenn Algorithmen auf Teamdynamik treffen – Gamifiziertes Training für sichere Notfallmedizin

Gröber A¹

¹Alexx Boxx Gesundheitspädagoge B.A., Notfallsanitäter, Deutschland

Zweck: In der Notfallmedizin sind strukturierte Algorithmen wie BLS, ALS und weitere Behandlungspfade fest etabliert. Kritische Zwischenfälle entstehen jedoch häufig nicht primär durch fehlendes Fachwissen, sondern durch Defizite in Kommunikation, Rollenverteilung, Situational Awareness und Entscheidungsprozessen im Team. Ziel dieses Workshops ist es, ein didaktisch fundiertes, gamifiziertes Trainingsformat vorzustellen und praktisch erfahrbar zu machen, das notfallmedizinische Fachinhalte systematisch mit Human Factors und Crew Resource Management verknüpft.

Methoden: Der Workshop basiert auf der Alexx Boxx, einem haptischen Escape Szenario zur Bearbeitung realitätsnaher Notfallsituationen wie Reanimation, Intoxikation oder akuter Verschlechterung. In Kleingruppen durchlaufen die Teilnehmenden strukturierte Entscheidungsprozesse entlang klinischer Algorithmen. Die Aufgaben erfordern kooperative Problemlösung, klare Rollenklärung, Closed Loop Kommunikation sowie Priorisierung unter Zeitdruck. Medizinische Inhalte werden nicht nur reproduziert, sondern aktiv angewendet, überprüft und in Entscheidungsarchitekturen eingebettet.

Die didaktische Konzeption orientiert sich an der Selbstbestimmungstheorie nach Ryan und Deci mit Fokus auf Autonomieerleben, Kompetenzerleben und sozialer Eingebundenheit. Ergänzend werden Ergebnisse einer experimentellen Vergleichsuntersuchung in der Notfallsanitäter Ausbildung einbezogen, in der Escape basiertes Lernen mit klassischem Frontalunterricht verglichen wurde. Ein strukturiertes Debriefing mit Schwerpunkt auf Fachinhalt, Entscheidungsqualität und Teamdynamik bildet den integralen Bestandteil des Workshops.

Resultate: In der zugrunde liegenden Untersuchung zeigte sich eine vergleichbare Entwicklung der Fachkompetenz im Vergleich zum Frontalunterricht. Gleichzeitig wiesen Teilnehmende des Escape Settings eine höhere Interaktionskompetenz, ausgeprägtere Verantwortungsübernahme und differenziertere Kommunikationsmuster auf.

Schlussfolgerungen: Gamifizierte Trainingsformate können in der notfallmedizinischen Aus- und Fortbildung eine evidenzorientierte Ergänzung darstellen. Durch die Verknüpfung von Fachwissen, Entscheidungsprozessen und Teamverhalten in einem immersiven Szenario werden kognitive und soziale Kompetenzen parallel adressiert. Der Workshop ermöglicht es, das Format selbst zu erleben und seinen Transfer in klinische Trainingskontexte kritisch zu reflektieren.

P2

Mental health and substance use evolution in Swiss ED residents: a 6-month prospective longitudinal single-center study

Parejas N^{1,3}, Beysard N^{1,3}, Saraga M^{2,3}, Carron PN^{1,3}

¹Service des Urgences, Centre Hospitalier Universitaire Vaudois (CHUV), Suisse; ²Service de Psychiatrie de Liaison, Centre Hospitalier Universitaire Vaudois (CHUV), Suisse; ³Faculté de Biologie et Médecine, Université de Lausanne, Suisse

Objective: Physicians' mental health and substance use are major public health concerns. Emergency medicine residents may be particularly vulnerable due to high workload, emotional

intensity, and irregular schedules. Despite growing awareness, prospective data examining the impact of emergency department (ED) rotations on residents' psychological well-being remain scarce. This study aimed to evaluate changes in mental health, lifestyle habits, and substance use during a 6-month ED rotation.

Methods: This 2-year mixed-methods longitudinal study was conducted at the Centre Hospitalier Universitaire Vaudois (CHUV) between November 2020 and May 2022. Residents starting an ED rotation completed surveys at baseline (T0) and after 6 months (T6). Surveys assessed lifestyle and substance use, and psychological well-being using validated instruments, including the Maslach Burnout Inventory (MBI), Hospital Anxiety and Depression Scale (HADS), and Pittsburgh Sleep Quality Index (PSQI). Voluntary semi-structured interviews conducted by a psychiatrist further explored residents' experiences.

Results: Among 47 residents completing T0, 31 also completed T6. Emotional exhaustion and depersonalization (MBI subscales) increased (median EE 18 to 21, $p = 0.03$; median DP 9 to 11, $p = 0.01$), while personal accomplishment remained stable. Anxiety scores slightly decreased ($p = 0.01$), whereas depression scores worsened ($p = 0.02$). Sleep quality deteriorated (median PSQI 4 to 5, $p = 0.01$). No statistically significant changes were observed in substance use or lifestyle habits. Nine residents participated in interviews, which highlighted five central themes: patient flow management, irregular schedules, supervision quality, emotional burden, and the specificities of patient care as experienced through the emergency department setting. These qualitative findings provided important context for interpreting the survey results.

Conclusions: After 6 months in the ED, residents showed statistically significant but clinically modest changes in mental health indicators. A supportive departmental climate may partly explain these relatively reassuring findings. Future research should include longer follow-up periods and multicenter designs to better characterize trajectories over time and enhance generalizability across diverse ED settings.

P3

How to encourage emergency physicians' wellbeing and retention in professional activities? A scoping review of the structural & organizational strategies

Bonvin S¹, Carron PN¹, Trombert A², Foerster Pidoux M¹

¹Emergency Department, Lausanne University Hospital and University of Lausanne, Rue du Bugnon 46, 1011 Lausanne, Switzerland; ²Medical Library, Lausanne University Hospital and University of Lausanne, Rue du Bugnon 46, 1011 Lausanne, Switzerland

Objective: To identify structural and organizational strategies that encourage wellbeing and retention of emergency physicians in professional activity.

Introduction: Emergency physicians are facing many constraints at work, that lead them to a high rate of exhaustion and burnout, resulting in staffing and attrition problems. Less evident are the factors and strategies that encourage the wellbeing and retention of emergency physicians in professional activities.

Methods: Given the paucity of information currently available to assess the factors favoring wellbeing and retention in emergency department activity, a scoping review seemed the most appropriate strategy. This review includes studies related to emergency physicians, working in peripheral establishment as well as university centers, and focused on interventions aiming to increase wellbeing, retention, satisfaction at work, and

preventing burnout. A scoping search of Embase, Medline, APA PsycInfo, Web of Science Core Collection, the Cochrane Database of Systematic Reviews, SocINDEX, Sociological Abstracts and Google Scholar was run with the collaboration of a health information specialist. Backward and forward citation searches were then performed. The screening was done on Covidence by two independent reviewers using a dedicated data extraction tool. In case of disagreement, a third author reviewed the papers and decided whether to include it or not.

Results: Out of 11503 articles identified and screened, 16 were included. Seven factors were identified as promoting well-being and retention. At the individual level, mindfulness interventions, virtual reality relaxation, and activity and sleep monitoring have proven to have certain effects. At the organizational level, we can cite wellness programs, focus groups, recognition of good work programs, and interventions aimed at reducing administrative burdens.

However, difficulties in defining terms and heterogeneous methods using subjective scales made it difficult to standardize results or to compare interventions.

Conclusion: Although a few interventions have been demonstrated, the literature on the subject is rather sparse, with few articles scientifically studying these issues in depth. To better understand structural and organizational strategies that encourage wellbeing and retention, interventional randomized research with a holistic approach focusing on multimodal interventions appears to be necessary.

P4

Implications of the Emergency Medicine Rotational Admission System, the „Linzer Aufnahme- rad“: a prospective, observational study

Oswald S¹, Ravioli S¹, Lindner G^{1,2}

¹Department of Emergency Medicine, Kepler University Hospital, Johannes Kepler University Linz, Austria; ²Department of Emergency Medicine, Inselspital, University Hospital Bern, University of Bern, Switzerland

Background: Emergency department (ED) overcrowding is associated with adverse outcome and system strain. In the capital city of Upper Austria, inpatient emergency admissions are organized in a rotating admission system – the so-called “Linzer Aufnahme- rad” (LAR) – in which responsibility for inpatient admissions rotates between hospitals according to a predefined three-week-schedule. The effects of this organizational model on care continuity and short-term outcomes have not been systematically evaluated. This study aimed to assess recent healthcare utilization, early ED revisits, and short-term readmissions within this framework.

Methods: This prospective observational study was conducted at the Department of Emergency Medicine, Kepler University Hospital Linz, over four months including 30 designated admission days. Adult non-traumatological emergency patients who provided informed consent were included. Data was collected using structured questionnaires and routine clinical documentation. Primary measures included ED revisits within 72 hours, hospitalization within 14 days, 14-day rehospitalization and in-hospital outcomes.

Results: Among 1004 included patients (median age 70 years; 50.2% female), 8.8% reported an ED visit within 72 hours and 14.1% had been hospitalized and discharged within the preceding 14 days. Overall, 7.8% required rehospitalization within 14 days. Most repeat encounters were related to the same medical condition (77.3% of 72-hour revisits; 62.0% of 14-day readmissions). EMS utilization was high among patients with recent healthcare contact (77.3-85.2%). In-hospital admission occurred in 36.1% of patients, ICU admission in 7.2%, and in-hospital mortality was 2.5%.

Discussion: A considerable proportion of ED presentations within the admission rotation system represented early repeat encounters linked to a recent admission care episode. These findings suggest that admission rotation structures may pose challenges for continuity of care during clinically vulnerable periods and warrant critical evaluation with respect to overcrowding and coordination.

P5

Who Rescues the Rescuers? Implementing a Psychological Safety Net in a Prehospital EMS Service

Marinello GL¹, Leonardi A¹, Manella L¹, Morandini G¹, Urietti L¹, Dell'Era M¹

¹Tre Valli Socorso, Ambulance service, Biasca, Switzerland

Introduction: Pre-hospital emergency medical service (EMS) personnel are repeatedly exposed to potentially traumatic events, increasing the risk of stress-related disorders and impacting both well-being and performance.

Objectives:

- Implementation of a low-threshold psychological support service
- Prevention of post-traumatic stress
- Prevention and reduction of burnout

Description: Following an internal report (2018) and an exploratory phase interrupted by the COVID-19 pandemic, an internal working group developed a formal procedure. Due to organizational constraints, collaboration with the public service was not possible; therefore, two psychologists/psychotherapists with specific expertise in trauma within emergency services were engaged. At the same time, a group of internal “observer antennas” was trained to identify potential psychological difficulties and signs of burnout. The pathway, implemented within an EMS service with a total of 110 staff members, allows activation of individual or team support (debriefing) either through direct request or internal referral following critical incidents. Roles, activation criteria, rapid access, confidentiality, and integration into the quality management system were defined.

Results: A regulated procedure and informational material for staff were developed and implemented at the organizational level for the entire workforce (n = 110). In January 2025, the service was activated for a group debriefing following an intervention involving violent circumstances; additionally, one staff member used the service preventively after exposure to a traumatic event. Given the recent implementation, quantitative outcomes are not yet available; however, structured monitoring has been planned (utilization, satisfaction, sick leave, and stress/burnout indicators).

Conclusions: A structured psychological support service within an EMS organization is feasible and represents an organizational safety net for protecting mental health. The project integrates staff well-being with quality of care and also responds to the requirements of IAS accreditation directives. Next steps include prospective evaluation and consolidation into routine operations.

P6

Strengths and weaknesses of ChatGPT in pediatric emergency medicine: a follow-up analysis

Spiegel R^{1,2}

¹Emergency Department, RKH Klinikum Ludwigsburg, Ludwigsburg, Germany; ²Baden Württemberg Cooperative State University (DHBW), Karlsruhe, Germany

Introduction: ChatGPT is frequently applied by parents for health-related questions. ChatGPT even recognizes pediatric

emergencies with a high accuracy. Prior versions of ChatGPT were able to recognize 94 to 100 percent of lifethreatening pediatric emergencies [1]–[2]. On the other hand, ChatGPT only recommended an emergency call in 54 to 60 percent of pediatric emergencies [1]–[2]. The question of this ongoing research project is whether the latest version of ChatGPT handles pediatric emergencies better than prior versions.

Method: Pediatric emergency scenarios were created applying the pediatric assessment triangle [3]–[4], the Broselow Tape™, the PediHelp App [5] and the DIVI Emergency APP [6]. A total of 5 lifethreatening scenarios were created. ChatGPT was analyzed whether it (i) correctly recognized the lifethreatening scenarios, (ii) recommended an emergency call and (iii) how succinct the answers were. The most recent, publicly available version of ChatGPT [7] was applied.

Results: ChatGPT recognized the lifethreatening emergencies in all 5 scenarios (100% correct). ChatGPT recommended an emergency call in 2 scenarios (40 percent) and an emergency call conditional on other life-threatening factors in another 2 scenarios (40 percent), in sum 80 percent. In addition, ChatGPT needed a total of 929 words for its recommendations.

Discussion: The strength of the current version of ChatGPT is that it correctly recognized lifethreatening pediatric emergencies in 100 percent of the scenarios. The downside is that it failed to advise an emergency call in at least one scenario. In two scenarios, it made an emergency call conditional on other factors (e.g. obtundation). It also failed to give succinct answers. Whereas the words "Make emergency call !" would be appropriate in each of the 5 scenarios, ChatGPT needed a total of 929 words, which is not very concise. Albeit better than previous versions [1]–[2], ChatGPT still misses safety and practicability in lifethreatening pediatric emergencies.

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P7

Evaluation of an Instant Messaging Group Among Emergency and Trauma Physicians: Impact on Workflow, Mental Health and Potential Educational Use

Mackes F¹, Quiroz A², Frank C¹

¹Universitäres Zentrum für Bewegungsapparat, Kantonsspital Baselland, Schweiz; ²Orthopädie und Traumatologie, Universitätsspital Basel, Schweiz

Effective communication between emergency department teams and other specialties is essential to ensure efficient, interdisciplinary, and timely medical care. In many hospitals, non-traditional tools such as instant messaging groups (e.g., WhatsApp) have been incorporated to facilitate coordination among physicians, particularly in areas where decision-making must be agile and collaborative, such as Emergency Medicine and Traumatology. These tools are increasingly replacing traditional forms of interaction, such as face-to-face or telephone communication, promoting a growing reliance on teleconsultations. This is particularly relevant in multicenter hospitals, where one of the major current challenges is how to ensure safe and effective remote clinical evaluations.

Although significant challenges exist regarding interdepartmental coordination, additional obstacles arise within the consultation interface itself. These include staff mental overload,

burnout, frequent interruptions during patient care, the coexistence of parallel communication pathways, and the need for proper documentation and billing of interconsultations. Added to these are pressures to reduce waiting times in emergency departments, staff shortages in many hospitals, and risks related to data confidentiality and protection when using digital platforms. Moreover, the future incorporation of artificial intelligence tools—such as automated analysis of emergency department data, processing of clinical chat content, or activation of alerts in response to specific consultation patterns—could profoundly transform workflow dynamics, creating new challenges and requiring healthcare teams to adapt.

This project aims to evaluate the impact of an instant messaging group created among emergency physicians, family physicians, and trauma specialists (both general and hand surgeons), which enables interconsultations via text, clinical images, and radiographs. The objective is to assess healthcare professionals' perceptions of this tool in terms of satisfaction of patients and medicals, improvement of subjective workload and mental health and educational potential.

To this end, a 41-question questionnaire was developed and sent to the 182 doctors who participated in the chat. The responses were then analysed.

P8

Sex and gender bias in major trauma care: a scoping review

Ghika-Nanchen A¹, Marzorati L¹, Merra A¹, Girardello C², Truong P¹, Carron PN¹, Nutbeam T^{3,4}, Clair C⁵, Ageron FX¹

¹Emergency Department, Lausanne University Hospital and University of Lausanne, Lausanne, Switzerland; ²Emergency Department, Hôpital Inter-cantonale de la Broye, Payerne, Switzerland; ³University of Plymouth, Plymouth, UK; ⁴IMPACT; Centre for Post-Collision Research Innovation and Translation, Devon Air Ambulance, Exeter, UK; ⁵Department of Ambulatory Care, Unisanté, University of Lausanne, Switzerland

Objectives: Sex/gender bias have been well-documented in clinical medicine. However, few studies have assessed sex/gender disparities specifically in major trauma care. This scoping review aims to explore sex and gender-based differences in the emergency management of severely injured patients.

Methods: A systematic literature review was conducted in the following electronic databases: Medline Ovid ALL, Embase, CINAHL with Full Text, Web of Science Core Collection, Cochrane Central Register of Controlled Trials with search criteria including keywords and mesh terms: gender, sex, major trauma, wounds and injuries. Three reviewers conducted the article selection.

Results: Seventy-four full-text articles were included in the study. Main themes of sex/gender-based differences were mechanism of injury, severity of trauma, trauma triage, trauma care, mortality, and complications. Women were older with more low-energy trauma than men. Women were more likely to suffer from pelvic and spinal cord injuries. Women were more likely to be under-triaged and under-treated. Sex/gender-based differences in mortality were inconsistent across studies. Adjusted mortality appeared similar between women and men, with conflicting evidence of increased mortality in men in some studies.

Conclusion: Women received less trauma care and were less likely to be transported to a trauma centre. These disparities are not fully explained by differences in injury mechanism or severity and instead appear to reflect modifiable features of trauma systems, particularly triage and transfer practices. Addressing these inequities will require system-level changes to ensure that access to specialist trauma care is based on clinical need rather than sex or gender.

P9

Prehospital pain management in trauma treated by helicopter emergency medical services: association of patient and physician sex

Satari B^{1,2}, Klug J^{3,4,5}, Uhr J⁶, Albrecht R^{2,4,7}, Fuchs A^{7,8}, Pietsch U^{2,4,7}

¹Department of Anesthesiology, University Hospital Basel, Basel, Switzerland; ²Department of Emergency Medicine, Inselspital, Bern University Hospital, University of Bern, Bern, Switzerland; ³; ⁴Faculty of Medicine, University of Geneva, Geneva, Switzerland; ⁵Division of Perioperative Intensive Care Medicine, Cantonal Hospital St. Gallen, St. Gallen, Switzerland; ⁶Department of Intensive Care Medicine, Lausanne University Hospital, Lausanne, Switzerland; ⁷Faculty of Health Sciences and Medicine, University of Lucerne, Lucerne, Switzerland; ⁸Swiss Air-Rescue, Schweizerische Rettungsflugwacht Rega, Zurich, Switzerland; ⁹Department of Anesthesiology and Pain Medicine, Inselspital, Bern University Hospital, University of Bern, Bern, Switzerland

Introduction: Pain in trauma patients is frequent and associated with adverse physiological and psychological outcomes. Despite the recognized importance of early and effective analgesia, prehospital pain management remains insufficient in a substantial proportion of cases. Emerging evidence suggests sex-related differences in analgesic treatment, with both patient and physician sex potentially influencing therapy. This study investigates whether specific physician-patient sex pairings, alongside clinical and operational factors, are associated with the efficacy of prehospital pain management and explores how these factors interrelate to contribute to inadequate analgesia.

Methods: We conducted an observational cohort study of trauma patients by a Swiss physician-staffed Helicopter Emergency Medical Service between 07/09/2020 and 24/07/2025. We included patients with a Glasgow Coma Scale (GCS) $\geq$ 13, a NACA Score $<$ VI, on-scene pain of $\geq$ 3 on a patient-reported NRS and a second pain assessment at hospital arrival. The primary outcome was sufficient pain management at hospital arrival, defined as NRS $\leq$ 3 at hospital arrival. Analgesic administration was evaluated for associations with insufficient pain control (NRS $>$ 3), persistent untreated pain, and pain reduction.

Results: Of the 43,024 pre-hospital missions analysed, 5168 met the inclusion criteria. The cohort was predominantly male (3097/5168; 59.9%); the median age was 47 [29–62] years. Extremity trauma was most common (3514/5168; 68%). In 32.2% (1663/5168; 95% CI, 30.9–33.3%) of cases, analgesia was insufficient. While male physicians achieved greater NRS reduction (Coef. 0.20; 95% CI, 0.12–0.28), male patients reported less pain relief (Coef. -0.13; 95% CI, -0.21 – -0.05). Higher initial NRS scores (OR 1.45; 95% CI, 1.39–1.51) and omission of analgesics (OR 5.70; 95% CI, 4.54–7.15) were associated with insufficient analgesia. The use of a combination of opioid and ketamine was associated with improved analgesia (OR 0.69; 95% CI, 0.58–0.83). The greatest pain reduction was observed with ketamine or combination therapy. The median Δ NRS was 5 (IQR 3–6) for ketamine and 5 (IQR 4–6) for combination therapy.

Conclusion: We found sex-related differences in patient-reported analgesia: male patients were more likely than female patients to report insufficient analgesia. Treatment by male physicians was associated with better patient-reported analgesia.

P10

Management by objectives: using data to improve efficacy

Ugolini G¹, Pozzi S¹, Giuliattini Burbui A¹

¹Direzione Operativa, Tre Valli Soccorso, Biasca, Svizzera

Objective: One of the primary purposes of the operational management of an ambulance service is to guarantee equal access to care to all the served population.

This became a challenging goal to achieve in a rural setting. Tre Valli Soccorso provides emergency medical service to about 25'000 inhabitants spread over a vast territory of almost 100 km² with an altitude difference of over 2,000 meters. The use of collected data from the interventions is not only intended for quality management of clinical performances, but also to check the proper cover of the territory by emergency units, to ensure the respect of quality criteria and speed of arrival in emergency cases.

Methods: Using the business intelligence software Qlik, the Operations Director's staff analyzes the arrival times of ambulances for emergency interventions, comparing the results in the different districts in relation to the vehicle's point of departure. It is impossible to reach the requested performance level in all this complex region, and the results vary from the areas most populated and more easily reachable to the small villages in the valleys. A study conducted in 2016 as part of a MAS diploma thesis in healthcare management analyzed all the factors that influence the delays and developed possible solutions.

The sub-district of the high valley of Blenio historically shows low performance results, due to the orography and the absence of operational bases. This led to establish a displacement of 1 ambulance from the main base of Biasca in the valley, based in the fire station right in the middle of Blenio valley. This change in the operational setup has led to an impressive improvement in performance. Subsequent analyses of operational data are directing management towards further organizational changes.

Results: The timely collection of data and its proper analysis have enabled structural and organisational changes to be implemented, thereby providing a better response to the healthcare needs of the population of the Val di Blenio. One year on, performance has improved by around 30% in terms of response quality, according to IAS criteria.

Conclusions: The task of the ambulance service's operational management is not only to oversee compliance with procedures and ensure operational continuity, but also to monitor activity results to identify areas for improvement and make organizational changes aimed at improving the system's efficiency. Correct use of data improves the quality of care.

P11

The Safety of Emergency Physician-Led Procedural Sedation and Analgesia: A Retrospective Cohort Analysis

Frei M¹, Stucky S¹

¹Department of Emergency Medicine, Hospital Visp, Switzerland

Background: Procedural sedation and analgesia (PSA) is a key skill an emergency physician should be able to provide safely, especially in emergency departments with a high case load of musculoskeletal injuries. Despite PSA being a worldwide standard in emergency medicine, in many ED's in Switzerland, however, PSA is provided by anaesthesia, often because there is concern about the safety of PSA provided by non-anaesthetists.

Method: We analysed 113 PSA's the emergency physicians provided at a regional ED within an eight-month period. Each

PSA was performed using a structured (pre)-intervention checklist with close monitoring, preoxygenation, but notably without capnography. Medication choice was up to the physician's discretion; there were no fasting times mandated before PSA. The choice of an ED physician-led PSA over an anaesthetist-led PSA was also up to the discretion of the ED-physician; as guidance, we recommended including patients up to ASA Class III.

Results: Our population consisted of 62% males, the median age was 50 years. PSA's were mainly performed for closed reduction of dislocated joints (67%) and fractures (16.8%), but also for abscess incision (5%), chest tube insertion (4%), and cardioversion (3%). There was a high success rate of the interventions of 93%. All failed interventions were joint dislocations, which subsequently underwent general anaesthesia with muscle relaxation for successful joint reduction.

In 42% of the PSA's the preferred drug combination was Ketamine-Propofol (Avg. dose: 0.65 mg/kgBW; 0.9 mg/kgBW), in 37% of the PSA's Midazolam-Ketamine (Avg. dose: 0.03 mg/kgBW; 0.54 mg/kgBW) was used.

We observed a low complication rate of 3.5% (4), mainly desaturation below <90% SpO₂. Most improved with chin lift and/or increased oxygen flow, one patient received bag-mask ventilation. No severe complications (aspiration, hypoxia/hypopnoea necessitating intubation, cardiac arrest, death) occurred. All complications were successfully managed by the ED team.

Conclusion: Standardised ED physician-led PSA is safe and reliable, especially for fracture and joint reduction, with a very low minor complication rate despite non-fasting patients and the lack of capnography. Within the small number of complications, no correlation can be made to the choice of medication, dosing or intervention, warranting further multicentric investigation. To our knowledge, this is the largest analysis investigating the safety of ED physician-led PSA in Switzerland.

P12

Expérience du retour à domicile des patients après une consultation aux urgences ambulatoires d'un hôpital universitaire: Patient-reported experience measure (PREMS)

Sieber M¹, Favre E¹, Desjardins M¹, Carron PN¹

¹Département des urgences, Centre Hospitalier Universitaire Vaudois, Lausanne, Suisse

Introduction: Près de 80% des patients consultant pour des pathologies ambulatoires aux urgences du Centre Hospitalier Universitaire Vaudois (CHUV) rentrent à domicile. Les consultations non planifiées, à 30 jours, pour un motif similaire représentent 5% des admissions annuelles. Le retour à domicile (RAD) depuis les urgences est une étape sensible pour les patients. Ils traversent une période de vulnérabilité pouvant conduire à une mécompréhension des soins et des recommandations de sortie favorisant un risque élevé d'événements indésirables : réadmissions, faible adhérence thérapeutique, manque de continuité des soins. Le but de cette enquête est de mesurer plusieurs dimensions de l'expérience vécue par des patients lors d'un RAD.

Méthode: L'étude a été conduite par un questionnaire patient-reported expériences mesures (PREMS) développé spécifiquement et proposé à un échantillonnage de convenance. Le questionnaire, constitué de vingt-trois items, évaluait les dimensions suivantes : qualité de la communication, information pour la préparation au RAD, soutien émotionnel perçu et implication du patient dans les soins. Les critères d'inclusion comprenaient un RAD à l'issue d'une consultation aux urgences, l'usage d'un smartphone et de la langue française.

Résultats: Septante-deux patients ont complété le questionnaire validé. Les résultats montrent que 80% des patients affirment avoir reçu des informations concernant le suivi après la sortie. Les informations relatives aux recommandations à suivre, aux résultats des investigations, aux symptômes à surveiller ou au traitement sont évaluées comme peu satisfaisantes : seuls 70 à 79% des patients affirment avoir reçu toutes les informations nécessaires. L'insatisfaction est particulièrement marquée concernant les effets secondaires potentiels des médicaments : 38% des patients affirment avoir été suffisamment informés.

Conclusion: Cette enquête révèle plusieurs besoins non satisfaits en matière de communication lors du RAD. Les résultats indiquent que la simple délivrance orale d'informations ne suffit pas : la compréhension effective par les patients et l'utilisation d'un support de communication sont déterminantes pour la qualité du RAD. Les données recueillies, associées aux recommandations de bonnes pratiques, ont conduit à une réflexion du service menant à la création de brochures d'information standardisées. La prochaine étape du projet consiste à créer un processus standardisé de retour à domicile.

P13

The Association between Body Temperature on Emergency Department Arrival and Short-Term Mortality in Severely Injured Trauma Patients: A Swiss Trauma Registry Analysis

Zurbruggen L A^{1,3}, Pietsch U^{1,2}, Müller M¹, Swiss Trauma Registry STR⁴

¹Department of Emergency Medicine, Inselspital, Bern University Hospital, University of Bern, Bern, Switzerland; ²Department of Perioperative and Intensive Care Medicine, HOCH Health Ostschweiz, St. Gallen, Switzerland; ³Department of General Internal Medicine, Inselspital, Bern University Hospital, University of Bern, Bern, Switzerland; ⁴Swiss Trauma Board

Introduction: Body temperature (BT) deviations are common in trauma patients, including those with traumatic brain injury (TBI), and are associated with increased mortality. Prior studies reported inconsistent associations between BT and mortality, and the influence of TBI status remains unclear. We aimed to assess the association between BT on emergency department (ED) arrival and short-term mortality in severely injured trauma patients and to evaluate whether TBI status acts as a modifier.

Methods: We conducted a retrospective multicenter cohort study using data from the Swiss Trauma Registry (STR-ID 21). Patients aged ≥ 16 years who were severely injured (ISS ≥ 16 and/or AIShead ≥ 3) and directly admitted were included. A directed acyclic graph was constructed based on prespecified assumptions to identify confounders. The association between BT on ED arrival and in-hospital mortality was assessed using multivariable logistic regression, with estimation of adjusted predicted probabilities and first derivatives across BT levels. Subgroup analyses were performed for isolated severe traumatic brain injury (isTBI; AIShead ≥ 3, AISothers ≤ 2) and isolated severe extracranial traumatic injury (non-TBI; AIShead = 0). Patients were further categorized by BT as hypothermia (<36°C), normothermia (36 - 37.9°C), and hyperthermia (≥ 38°C) to estimate adjusted probabilities and the adjusted population attributable fraction (aPAF) for mortality endpoints.

Results: Overall, 7,675 patients were included, with an in-hospital mortality of 12.2%. Adjusted predicted probabilities of in-hospital mortality were 14.5% (95% CI, 13.5-15.6) in hypothermic, 10.7% (95% CI, 9.9-11.4) in normothermic, and 14.7% (95% CI, 10.3-19.1) in hyperthermic patients. The aPAF associated with hypothermia was 12.2% (95% CI, 8.0-16.2), compared with 1.4% (95% CI, -0.1-2.9) for hyperthermia. Overall, the association between BT on ED arrival and in-hospital mortality was non-linear and U-shaped, with a nadir between 36 and 37°C. In

the isTBI subgroup, the association remained non-linear and U-shaped, with overall higher mortality. In the non-TBI subgroup, the association was non-linear, showing a continuously decreasing pattern.

Conclusion: In this study, BT on ED arrival was non-linearly associated with in-hospital mortality in severely injured trauma patients, exhibiting a U-shaped relationship. Subgroup analyses suggested distinct patterns and identified TBI as a potential modifier of this association.

P14

Survival factors of Out-of-Hospital Cardiac Arrest from 2018 to 2023 in the State of Jura (Switzerland): a retrospective observational study

Mollet C^{1,2}, Castelain T^{1,2}, Galofaro L^{1,2}, Garin D³, Guechi Y², Ribordy V^{1,2}

¹Faculty of Science and Medicine, University of Fribourg, Switzerland; ²Department of Emergency Medicine, University and Teaching hospital, Fribourg, Switzerland; ³Department of Cardiology, University Hospitals of Geneva, Switzerland

Aim: To improve OHCA survival, studies have shown that increasing the likelihood of intervention by Volunteer Community Responder and the use of an AED prior to EMS arrival can reduce no-flow and low-flow times. Since 2018, the Canton of Jura has been mobilizing VCRs and developing an AED network. The aim of this study was to assess the deployment of VCRs and the AED network through a spatiotemporal analysis of their activation and response times.

Methods: We collected data from the SWISSRECA registry of all OHCA occurring in the Canton of Jura between 2018 to 2023. Patients were divided into two groups based on whether a VCR intervened. Descriptive statistics were used to compare the groups. Logistic regression models were constructed to assess whether VCR intervention was associated with ROSC and survival, adjusting for age, sex, home location, time to EMS arrival, initial rhythm, and witness status. For three outcomes (survival, VCR intervention, and AED use), heatmaps of OHCA locations were generated using the Kernel density method.

Results: A total of 303 patients were included. Among them, 103 (34%) achieved ROSC, 68 (22%) were admitted to hospital with ROSC, and 24 (8%) survived to hospital discharge. Of the total cohort, 94 patients (31%) received VCR intervention, while 209 (69%) did not. Witnessed collapse was significantly less frequent in the VCR group (55% vs 73%; $p = 0.004$). Pre-EMS CPR (93% vs 53%; $p < 0.001$), pre-EMS AED use (36% vs 6%; $p < 0.001$), and dispatcher-assisted CPR (70% vs 34%; $p < 0.001$) were all higher in the VCR group. There were no significant differences in bystander CPR (61% vs 53%; $p = 0.24$), initial shockable rhythm (29% vs 31%; $p = 0.78$), or EMS arrival time (median 12 vs 11 minutes; $p = 0.05$). Among the 94 VCR cases, the median call-to-VCR arrival time was 9 minutes [IQR 6, 12].

Conclusion: The VCR and AED network in the rural Canton of Jura significantly increased the rates of pre-EMS CPR (from 53% to 93%) and pre-EMS AED use (from 6% to 36%) when VCRs intervened. Similarly, the time to first CPR was reduced from 12 to 9 minutes with VCR intervention, including a median 5-minute delay to alert the VCRs. Even though no significant effect on ROSC or survival was observed after adjustment, likely due to the limited sample size, VCR alerts were more frequently activated in unwitnessed cases, which may indicate confounding by indication. Further research is required to investigate the underlying causes of this prolonged activation delay.

P15

Structural empowerment of triage nurses in the redirection of low-acuity patients in a Swiss emergency department: a mixed-methods convergent pilot study

Guechi Y^{1,2,3}, Noire Y², Castelain T^{1,2}, D'Agostino R¹, Ribordy V^{1,2}, Feral-Pierssens A-L^{3,4}

¹Department of Emergency Medicine, Fribourg Cantonal Hospital, Switzerland; ²Faculty of Science and Medicine, University of Fribourg, Switzerland; ³Laboratory for Education and Health Promotion, Paris-Sorbonne University, France; ⁴Emergency Department, Hôpital Avicenne, Assistance Publique-Hôpitaux de Paris, France

Background: Similar to most high-income countries, almost 30% of consultations in Swiss hospital emergency departments (EDs) involve patients with low-severity levels. Redirecting patients with low-severity conditions to non-hospital facilities has proven effective internationally in reducing ED overcrowding, wait times, and improving patient satisfaction without compromising safety. Specifically, this study aims to understand the conditions under which the patient redirection role is exercised in triage.

Methods: We conducted a mixed method study among ED triage nurses ($n = 23$) in an urban teaching hospital in Western Switzerland. Data collection combined non-participant observation and semi-structured interviews. Data were analyzed through a systematic coding process where common themes across the studies were identified.

Results: Structural empowerment assessed using the Conditions of Work Effectiveness Questionnaire-II evaluated six dimensions on a 5-point Likert scale (opportunities, access to information, organizational support, access to resources, formal power, informal power). Quantitative results showed high scores for opportunities and informal power, while access to information and organizational support was significantly lower. These trends converged with the qualitative data, with triage nurses describing real autonomy, but constrained by a lack of clinical feedback and variable interprofessional support.

Conclusions: Although exploratory, our findings highlight the importance of organizational initiatives focusing on feedback loops, interprofessional support and continuous learning processes. Future research should transition from cross-sectional studies to longitudinal designs to assess the temporal impact of organizational changes, such as implementing formal feedback mechanisms on structural empowerment levels.

P16

The Effect of Conversational Hypnosis on the Well-Being and Behavior of Emergency Department Healthcare Providers : Results of a Single-Center Prospective Observational Study

Tavernier C¹, Girard A¹, Pasche N¹, Klinger M¹, Hugli O², Berna C³, Walther-Lagger S², Caillet-Bois D²

¹Faculty of Biology and Medicine, University of Lausanne, Écublens, Switzerland; ²Emergency Department, Centre hospitalier universitaire vaudois (CHUV), Lausanne, Switzerland; ³Département of Anaesthesiology, Centre de médecine intégrative complémentaire (CEMIC), Centre hospitalier universitaire vaudois (CHUV), Lausanne, Switzerland

Objectives: Emergency department (ED) healthcare providers (HCPs) are exposed to substantial stress, particularly during procedures. We evaluated whether a short 4-day training in conversational hypnosis (CH), primarily aimed at reducing patient pain and anxiety, was associated with improved HCPs well-being and greater empathy towards patients. Our objectives were to assess the effect of CH training on overall occupational stress and procedure-related stress, and to compare empathy between HCPs trained and not trained in CH.

Method: Prospective, monocentric observational study (October 2024–December 2025). Patients were included during investigators' presence; CH was applied according to the availability of trained HCPs. Pre-procedural fatigue, overall occupational stress, and procedure-related stress were assessed using a visual analog scale (VAS, 0–100 mm). Patient-perceived empathy was measured using the Consultation and Relation Empathy scale (CARE, 10 items with a Likert scale 1–5, higher score indicative of greater empathy). Investigator-assessed empathy was measured using a 5-item dichotomous observational score. Data are presented as medians (IQR) or counts (%). Comparisons used chi-square test or Mann-Whitney test.

Results: 132 patients were included (64 CH, 68 controls (C)). Fifty-four HCPs: 14 in the CH group (5 nurses, 9 physicians) and 40 in the C group (2 nurses, 38 physicians); age: 34.0 (33.0–37.8) in CH group vs. 28.0 (26.8–31.0) years in C ($P < 0.001$); female HCPs: 10 (71%) of CH group vs. 22 (55%) of C ($P = 0.282$). ED experience: 5.0 years (3.3–7.8) CH vs. 0.0 (0.0–1.0) C ($P < 0.001$). CH HCPs reported lower overall professional stress: 5.0 (0.0–20.5) vs. 21.0 (7.5–40.0) ($P < 0.05$), with no difference in pre-procedural fatigue or procedure-related stress. Empathy was higher in the CH group: CARE score 44.3 (40.0–50.0) vs 39.2 (33.0–48.0) ($P < 0.001$), and observational score 4.0 (4.0–5.0) vs 3.0 (2.0–4.0) ($P < 0.001$).

Conclusion: CH training was associated with lower occupational stress and higher empathy, as perceived by patients and observers during minor procedures. These findings suggest that CH may improve both HCP experience and the quality of patient-provider interactions.

P17

Exercise-Induced Cardiac Arrest in a Healthy Teenager with an Unknown Congenital Heart Defect: A Case Report

Rüfenacht MS^{1,2}, Suppan L²

¹Service d'Accueil et d'Urgences Pédiatriques, Hôpitaux Universitaires de Genève, Suisse; ²Unité Préhospitalière de Réanimation, Hôpitaux Universitaires de Genève, Suisse

This case report describes an exercise-induced cardiac arrest in an apparently healthy teenager who was later found to have an undiagnosed congenital heart defect.

At the finish line of a junior race, a 12-year-old teenage boy presented with syncope. Initial assessment revealed hypotension at 76/35 mmHg accompanied by increasing agitation.

Intravenous fluid resuscitation was immediately initiated. The patient's condition rapidly deteriorated, progressing to brady-asystole, which necessitated cardiopulmonary resuscitation (CPR). After 4 minutes of CPR, return of spontaneous circulation (ROSC) was achieved.

Shortly after, the patient developed bloody, frothy sputum, indicating pulmonary edema. On-site oro-tracheal intubation was attempted but was complicated by a second episode of brady-asystole. ROSC was re-obtained following successful intubation.

Upon arrival at the hospital, investigations confirmed massive pulmonary edema. The patient was promptly admitted to the pediatric intensive care unit and was successfully extubated the next day.

An initial echocardiogram revealed a suspicious coronary artery pathway with an inter-aortic-pulmonary course and abnormal Doppler flow. Subsequent advanced imaging confirmed a malignant course of the left common trunk. The anomalous artery originated from the right coronary ostium and followed an inter-aorticopulmonary intramural course before resuming its normal anatomical path.

Given the severity of the coronary anomaly, the patient underwent surgical reimplantation of the left coronary artery. After 18

days of inpatient treatment, the patient was discharged home with no neurological sequelae.

This case highlights the critical importance of comprehensive event-specific response plans and the rapid response capabilities of pre-hospital emergency services. The seamless coordination throughout the emergency care chain proved crucial in saving the patient's life. The presence of an undiagnosed congenital coronary artery anomaly in an otherwise healthy teenager underscores the need for vigilance in assessing young athletes presenting with cardiac symptoms during or after intense physical exertion.

This case emphasizes the importance of well-coordinated emergency response systems in managing unexpected cardiac events in young athletes. It also highlights the importance of considering congenital cardiac anomalies in the differential diagnosis of exercise-induced syncope or cardiac arrest in seemingly healthy young individuals.

P18

Therapeutic Communication for Pain and Anxiety related to minor Medical procedures in the Emergency Department: a monocentric, observational cross-sectional study (TOPA-MED)

Pasche N², Girard A², Tavernier C², Klinger M², Walther-Lagger S¹, Berna C³, Hugli O¹

¹Département of Emergency, Centre hospitalier universitaire vaudois (CHUV), Switzerland; ²Faculty of Biology and Medicine, University of Lausanne, Ecublens, Switzerland; ³Département of Anaesthesiology - Centre de médecine intégrative et complémentaire (CEMIC), Centre hospitalier universitaire vaudois (CHUV), Switzerland

Objective: Pain and anxiety are common among patients in the emergency room and can be exacerbated by invasive diagnostic or therapeutic procedures. This study aimed to measure the impact of conversational hypnosis (CH) on procedural pain and anxiety in the emergency room. Secondary outcomes were patient-perceived empathy of healthcare providers (HCPs) and the quality of patient-HCP interaction during these procedures.

Methods: This monocentric, prospective observational study was conducted from 03.10.2024 to 23.12.2025. Pain and anxiety intensity were assessed using visual analog scales (VAS, 0–100 mm) in patients managed during the procedure by HCPs trained in CH (CH group) or not (control or C group). Perceived empathy was measured using the CARE score (0–50 points) and the interaction quality using a VAS (0–100 mm). Patients were included during investigators' working hours and allocated to the CH group when a trained HCP was available or to the C group otherwise. Data are presented as medians (interquartile range) or counts (%). Comparisons used chi-square or Mann-Whitney tests.

Results: A total of 132 patients were included (64 CH 68 C); Male sex: 61% CH vs. 52% C ($P = 0.27$); median age: 43.0 years (30.8–59.0) CH vs. 53.0 years (32.8–72.3) C ($P = 0.08$); baseline pain: 38.5 mm (21.8–60.0) CH vs. 30.0 mm (12.3–66.0) C ($P = 0.53$); baseline anxiety: 26.0 (13.8–50.0) CH vs. 21.0 (3.8–57.3) C ($P = 0.69$). Procedures were performed by 14 HCPs (5 nurses, 9 physicians) in the CH group vs. 40 (2 nurses, 38 physicians) in the C group. Procedural pain was 33 mm (6.75–56) CH vs. 50 mm (19.0–68.0) C ($P = 0.07$). Procedural anxiety was 20.5 mm (0.8–50.0) CH vs 16.5 mm (7.0–63.0) C ($P = 0.66$). CARE scores were 44.3 (40.0–50.0) CH vs. 39.2 (33.0–48.0) C ($P < 0.001$). Perceived interaction was 93.6 mm (91.8–100.0) CH vs. 91.3 mm (83.0–100.0) C ($P = 0.83$).

Conclusions: In the emergency room CH was not associated with reduced procedural pain or anxiety. However, HCPs trained in CH were perceived as more empathetic, without differences in overall interaction quality.

P19

How triage nurses generate initial hypotheses during the first patient encounter: A focused ethnographic study

Noire Y^{1,2}, Guechi Y^{2,3}, Mazar E³, Castelain T^{2,3}, Pelaccia T^{4,5}, Ribordy V^{2,3}

¹School of Health Science Fribourg, HES-SO University of Applied Sciences and Arts Western Switzerland, Fribourg, Switzerland; ²Faculty of Medicine, University of Fribourg, Fribourg, Switzerland; ³Department of Emergency Medicine, Fribourg Hospital, Villars-sur-Glâne, Switzerland; ⁴Faculty of Medicine, University of Strasbourg, Strasbourg, France; ⁵Prehospital Emergency Care Service (SAMU 67), Strasbourg University Hospital, Strasbourg, France

Background: Triage nurses play a vital role in emergency departments. While their duties and profiles vary across countries and hospital settings, one characteristic unites them all: their ability to quickly identify an emergency situation. This is a crucial skill in patient care, one that requires strong clinical reasoning. Yet that reasoning is heavily influenced by the context and the professional environment.

Aim: The aim of this study was to explore how triage nurses generate their initial hypotheses at the very start of the triage process, and which immediately available cues contribute to this early interpretation of the situation.

Methods: This qualitative study was conducted in three regional hospitals and included 10 triage nurses. Nurses wore a forehead-mounted GoPro camera to record triage from their point of view. Semi-structured, video-cued recall interviews were conducted immediately after triage. Deductive and inductive coding was then carried out and analysed using thematic analysis methods.

Results: The average age of triage nurses was 36 years, with an average of 6.5 years of professional experience in the emergency department. Triage nurses generated hypotheses as soon as they encountered the patient, largely through pattern recognition (a core mechanism associated with intuition). These hypotheses were sometimes made as soon as the patient was registered at the emergency desk reception and even before talking to them. These hypotheses were based on the patient's main presenting complaint, their facial expression, and the time reported for the onset of symptoms.

Conclusion: Triage nurses operate in a complex environment and use rapid clinical reasoning processes that draw on readily available cues and prior experience. These early hypotheses

appear to rely on intuitive processes. Our findings may inform triage education by highlighting the early, experience-based processes involved in hypothesis generation and the potential value of explicitly addressing intuitive reasoning in triage training.

P20

Redirection of Low-acuity Patients Presenting to the Emergency Department to Alternative Sites of Care- a Scoping Review

Gobet F^{1,2}, Blaser D^{1,2}, Karlen M³, Guechi Y^{1,2}, Ribordy V^{1,2}

¹Faculty of Medicine, University of Fribourg, Fribourg, Switzerland; ²Department of Emergency Medicine, Fribourg Hospital, Villars-sur-Glâne, Switzerland; ³General Internal Medicine, Hospital Center of Valais Romand (CHVR), Sion, Switzerland

Introduction: High numbers of low-acuity visits are often cited as one of the causes of ED crowding. Reasons for low-acuity presentation to the ED include difficulties accessing other sources of care in a timely fashion. This study aims to provide an overview of available literature on ED based redirection of low-acuity presentations to alternative care.

Methodology: Existing academic and grey literature examining redirection of adult low-acuity patients presenting to the ED to other sources of care was synthesized using a scoping review following JBI Methodology for scoping reviews. Using a structured search strategy, 5 academic databases (MEDLINE, Embase, CINAHL, Web of Science and Cochrane Library) as well as gray literature was searched. Studies were selected in a multi-stage manner by two independent reviewers. Data were extracted using a piloted data extraction tool by one reviewer and checked for accuracy by a second reviewer. Data analysis will be performed by simple frequency counts and thematic analysis and descriptive results of included studies presented.

Results: 13'620 studies were examined, with 110 studies included and extracted. Currently, the remaining results are still under analysis and will follow.

Conclusion: Although it is not yet possible to draw conclusions as data analysis is currently underway, the identification of 110 relevant studies indicates a considerable volume of data. The authors are committed to making the final results available and presenting them by the time of the congress.

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