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THE IMPLEMENTATION OF VIOLENCE PREVENTION POLICIES AND PROGRAMS IN HOSPITALS

Agnieszka Kosny, Sabrina Tomina, Era Mae Ferron, Monique Gignac, Lynda Robson, Cameron Mustard, K Cullen*. *Institute for Work and Health, Toronto, Ontario, Canada*

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Introduction Violence in hospitals is a serious occupational health and safety (OHS) issue affecting the physical and mental health of front line staff, as well as, the quality of patient care. In 2010, the province of Ontario (Canada) introduced legislation that directs hospitals to put into place violence prevention and management systems. Our study examined how five Ontario hospitals have developed and implemented their violence prevention programs.

Methods Semi structured interviews were conducted with eight key informants external to hospitals (legislators, union leaders, hospital associations), management and occupational health and safety specialists in hospitals (n=40), 21 focus groups (n=115) and interviews (n=6) with front line workers. Five hospitals participated in the study. Interview and focus group questions focused on the effect of the legislation on the development of violence prevention programs and how these were implemented across departments. Once data were collected, a code list was developed by the research team by reviewing the transcripts. Each transcript was coded by two researchers and then a thematic, inductive analysis was carried out. The constant comparative method was used to identify differences and similarities across hospitals and to understand factors that shape hospital policies and practices in the area of violence prevention and management.

Findings Our study findings suggest that while legislation sets parameters for the development of policies, serious violence-related events and the presence of a violence prevention 'champion' bolster long-term commitment to violence prevention in hospitals and the development of sustainable programs. We discuss four key components related to the prevention and management of violence in hospitals, namely; security systems, patient 'flagging', codes and alarms and incident reporting.

Discussion Our findings detail how management commitment, workplace culture and broader structural factors can shape the implementation of hospital policies around violence prevention and reporting. Study recommendations focus on the long-term sustainability of violence prevention practices in the acute care sector and the implications this can have on worker health.

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FACING CHALLENGES IN OCCUPATIONAL AUDIOMETRY FROM SOUTH AFRICA

AD Butkovic*, AA Huiskamp. *University of the Witwatersrand, Johannesburg, South Africa*

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Introduction This presentation provides an overview of the Occupational Audiometric Refresher Programme as field-tested in Gauteng province, South Africa. Despite growth in occupational health, audiometric surveillance is fragmented with poor record quality in RSA as similarly reported in USA and UK. Limited training opportunities perpetuate in Africa with no

legal requirement for audiometrists to attend refresher programmes. The study thus developed and tested an intervention that would improve audiogram quality and cohesive result management.

Method Mixed methods enriched the structured modularised blended learning refresher programme that evolved. A one group pre-test, post-test field-test with 49 purposively sampled registered audiometrists. Quality of the pre-intervention biological calibration audiogram was compared against a compliant record, and the individual's 3 spaced post-intervention audiograms, using the validated Quality Audiometric Record Checklist (QARC). Content analysis of evaluation forms provided additional intent for change.

Results Pre-test audiograms quality scored at 57% average compared to 83% average post-test. Slight negative correlations existed between formal training ($r=-0.22861$), the reliance on automation ($r=-0.04295$) with their pre-test. T-testing of the lowest post-test scores was $t(8)=3.00007$ to the pre-test. This exceeded the critical $t(\alpha 0.05)=2306$. Appropriately managed results improved from 9,32% on pre-test to 73%. Despite login challenges (72%), time (66%) and capacity (41%) hindrances, the enhancing factors of transferring learning into practice included regular self-audits (72%) and to involve employers on the programme (72%).

Discussion Although not generalisable these results demonstrate that South African audiometrists produce poorer audiograms as related to the time lapsed from formal training and reliance on automation. In part solution to overcoming various challenges, the structured refresher programme provided improvement in preparation and legal criteria, and result management. The impact of the programme could further be enhanced through regular audits with audiometrists and employers.

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PERCEPTIONS OF THE USE OF TECHNOLOGY IN A BLENDED LEARNING OCCUPATIONAL HEALTH NURSING PROGRAMME IN DURBAN, SOUTH AFRICA

¹PM Orton*, ²KM Nokes, ³PJ Scott, ^{2,4}DE Hickey. ¹Durban University of Technology, Durban, South Africa; ²Hunter College, City University of New York, New York, USA; ³Mabedhlana Occupational Health Centre, Creighton, South Africa; ⁴New York City College of Technology, New York, USA

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Introduction Blended learning refers to an educational strategy that combines face-to-face classroom instruction with on-line learning. This teaching strategy was introduced into an occupational health nursing (OHN) programme at the Durban University of Technology in 2011.

Methods A mixed methods convergent design was used to merge concurrent quantitative and qualitative data to address the study aim. Quantitative data were collected from student cohorts and qualitative data were collected from all the OHN programme lecturers. The *Perceptions about the use of web-based learning* was used to measure current OHN student perceptions of web-based learning in the OHN programme. The demographic and work-related instrument measured person-related factors. Qualitative data were collected using three semi-structured interview questions.

Quantitative data were analysed using SPSS v22. Two-tailed Pearson product moment correlations and t-tests were computed on the six factors between the scores of first and

second year students. Qualitative data were analysed using the applied thematic analysis methodology.

Result Computer anxiety was significantly higher for first year students compared to second-year students ($t=4.08$, $p<0.001$). Lecturers also indicated barriers to using on-line technology for teaching.

Discussion Blended learning, a useful teaching strategy, has the potential to advance the OHN specialisation programme at DUT through the numerous opportunities for collaborative learning that the online technology affords. However, the challenges faced by both lecturers and students need to be addressed through focused interventions to ensure the optimal use of this teaching/learning strategy.

177 ADVANCING OCCUPATIONAL AND ENVIRONMENTAL HEALTH NURSING CONTINUING EDUCATION RESOURCES THROUGH TECHNOLOGY

MG Ryan*. President, American Association of Occupational Health Nurses (AAOHN), Chicago, Illinois, USA

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Introduction This presentation will demonstrate, highlight, and review AAOHN's global reach through technology and social media that provides 24 hour access to occupational and environmental health nursing standards of practice and continuing education resources.

Methods A retrospective literature and organisational review was conducted to determine *Global Health 2035* initiatives that occupational and environmental health nurses (OHNs) can use to demonstrate an impact through existing and projected future resources.

Result AAOHN, the premier association of OHNs, ensures continuing education resources not only for practice, but also for professional board certification. To accomplish this, there is one annual national conference along with a global summit offered every 3 years with the 5th global summit scheduled for 2020. Since 2016, a virtual conference option has been provided with on-line live-streaming. Online educational live/archived webinars and standards of practice are available free with membership or for a nominal fee. Through NIOSH grants and in conjunction with organisation expert collaboration, free respiratory protection program modules (3rd and 4th modules expected Fall 2017) are accessible at www.aaohn.org. AAOHN's journal, *Workplace Health and Safety*, provides research, case studies, and continuing education modules for purchase. Additionally, collaboration with other organisations advances OHN practice and has expanded current grant opportunities for further educational resources both in Hepatitis C and Infection Prevention and Control. Utilising these AAOHN resources, along with opportunities to share and publish current research, OHNs are prepared to offer and provide preventive services under new/changing health care systems to meet or exceed *Global Health 2035 initiatives*.

Conclusion AAOHN's innovative continuing education technology resources continue to provide OHNs with up-to-date tools for:

- preparing for professional board certification;
- ensuring that worker health and safety programs and services meet or exceed *Global Health 2035 initiatives*; and
- meeting future health care challenges.

1378 PERMANENT EDUCATION PRACTICE IN OCCUPACIONAL HEALTH: AN INTEGRATIVE REVIEW

¹Ellen Silva da Anunciação, ¹Cristiane Helena Gallasch*, ¹Magda Guimarães de Araujo Faria, ¹Eugenio Fuentes Pérez Júnior, ¹Priscila Cristina da Silva Thiengo, ²Luciana Valadão Alves Kebian. ¹Rio de Janeiro State University, Rio de Janeiro, Brazil; ²Instituto Federal de Educação, Ciência e Tecnologia Fluminense, Rio de Janeiro, Brazil

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Introduction Permanent education in health has not the aim of training health professionals, but proposes to bring them together the team to build knowledge, valuing the concept of teaching-learning through a new policy proposal to improve work processes.

Objective To analyse experiences and strategies of continuing education about workers' health in scientific publications from the last ten years.

Method It is a literature integrative review, from 2006 to 2016, with search in Virtual Health Library and Scientific Electronic Library Online databases. All the six steps of methodology were developed: defining research question – *What strategies and experiences of permanent education for workers' health have been described in the literature?*; determining search strategy, with *Occupational health*, *Continuing education* and *Permanent education* as descriptors; categorising studies; reading papers to determine those containing results; discussion of the results; and presentation of the integrative review.

Results Eight articles were selected and analysed. After applying all steps of integrative review, data was classified in two categories: *Strategies of continuing education* and *Experiences of continuing education*.

Conclusion There is a lack of scientific and technical knowledge about Strategies of continuing education, being an important cause of difficulty to develop the work process, which is often aimed to collective strategies and always seeking the transmission of knowledge. About Experiences of continuing education, it's observed the development of guidelines directed to the ergonomic risks, with participation of workers.

466 ANALYSIS OF HEART RATE VARIABILITY DURING THE INHALATION OF A DIFFUSED AROMA

¹Yuriko Hachiya*, ²Minori Shibata, ³Hiroshi Inujima. ¹School of Health Sciences Occupational and Community Health Nursing, University of Occupational and Environmental Health, Japan, Fukuoka, Japan; ²Department of Otorhinolaryngology Head and Neck Surgery, School of Medicine, University of Occupational and Environmental Health, Japan, Fukuoka, Japan; ³Graduate School of Information, Production and Systems, Waseda University, Fukuoka, Japan

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Introduction Stress-related disorders, such as depression, psychosomatic disorders and anxiety neurosis, are common and increasing in the workplace. Aromas have ataractic and sedation effects on the parasympathetic nerves. They also affect the feelings of fatigue from stress by stimulating the central nervous system. The purpose of this study is to examine the effect of an olfactory stimulus on changes in a physiological index. Using aromas during the loading of stress, we measured beat-to-beat interval (R-R interval) times from electrocardiogram (ECG) recordings.

Methods The subjects in our study were 3 male medical university students (subjects' codes were A, B and C). After