

carried out with extensive measurements involving workers of specific sectors (fishing, farming, quarry).

Conclusion The developed algorithm is an instrument useful for determining the cumulative UV erythral dose of workers with the best possible level of approximation, since it was obtained on the basis of the previous working exposure derived from a questionnaire filled by the worker itself. The algorithm can be also used as prevention instrument for the previous evaluation of the occupational risk.

1408 SURGICAL SMOKE – WHAT IS IT AND WHAT ARE THE RISKS? A REVIEW

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Introduction Operating room (OR) staff are exposed to surgical smoke on a daily basis. With the increased use of intraoperative smoke-generating devices, this is a significant occupational health hazard.

Methods A database search was performed for literature on surgical smoke from 1980–2017.

Results Electro-, laser and ultrasonic surgical techniques produce surgical smoke. 95% of surgical smoke is water and 5% is a combination of chemicals and cellular debris. Up to eighty chemicals, including the carcinogen Benzene, have been identified. The chemical load from cautery of one gram of tissue is comparable to that derived from six cigarettes. HIV and HPV viral DNA have been isolated, and both Staphylococcus and Neisseria cultured from surgical smoke. At less than ten micrometres in diameter, surgical smoke particles can remain airborne and are inhalable; the smallest fractions entering the alveoli. Smoke particles diffuse along concentration gradients within the OR atmosphere exposing all staff, and not just the operator or those scrubbed. Animal studies have demonstrated pulmonary congestion, interstitial pneumonia and emphysema secondary to surgical smoke exposure. Associated symptoms reported by staff include headache, problematic lacrimation and cough – affecting 58%, 42% and 20% of doctors respectively in one survey. An association with cancer has been made through case series. Standard surgical facemasks offer no protection; whilst portable evacuation devices are the best risk reduction measure. No legislation currently exists in the United Kingdom, but many international organisations offer guidance on minimising surgical smoke exposure in the workplace.

Conclusion OR staff training and policies should align with the latest guidance so that appropriate risk reduction measures can be put in place to protect health.

1438 PREVALENCE OF PRESENTEEISM AND ITS ASSOCIATED FACTORS AMONG NURSES IN A TEACHING HOSPITAL IN NIGERIA

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Introduction Presenteeism is defined as going to work despite having medical conditions that suggest one should be absent. There is dearth of studies on presenteeism among nurses

globally, especially in Africa, and Nigeria inclusive. This study therefore assessed the prevalence of presenteeism and its associated factors among nurses at a teaching hospital in Nigeria.

Methods A Cross-sectional study was carried out among nurses (317) at the University of Benin Teaching Hospital, Nigeria (August 2015 to July 2016). Inclusion criteria were nurses, who had worked in direct assistance to patients, gave their consent and had spent at least one year in the service of the hospital. Stratified random sampling technique was utilised. Pre-tested, self-administered questionnaire was used for data collection. Minimum Sample size calculated was 317. Data was analysed using IBM SPSS Version 21.0. Ethical approval was gotten and confidentiality was ensured during the study.

Results The response rate was 100% and the mean age of the respondents was 41.9±9.2 years. In the last 12 months, 242 (76.3%) respondents had reported to work sick and out of these 77 (31.8%) had reported twice, 48 (19.8%) had reported seven times while 32 (13.2%) had reported thrice. Several reasons were given for going to work sick. Age, marital status, years worked in the hospital, nursing cadre, highest level of qualification and level of job satisfaction were found to be associated with presenteeism ($p < 0.05$).

Discussion The high prevalence of presenteeism in this study could be attributed to high level of job satisfaction and heavier workload after a sick leave. Among the respondents that had reported to work sick in the last 12 months, malaria was the commonest condition. Nigeria is a malaria endemic region. It is recommended that the management of the hospital pay closer attention to the consequences of nurses' presenteeism.

1470 EVALUATION OF THE OCCUPATIONAL BIOLOGICAL RISK AT THE HEMODIALYSIS CENTRES OF CASABLANCA

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Introduction accidental blood exposures (ABE) are common in everyday practice. On a daily basis, they represent an indisputable risk for various categories of medical occupations. In hemodialysis, the risk of ABE is omnipresent for health care professionals.

Methods This is a study carried out amongst the staff of hemodialysis centres in the public health sector of the city of Casablanca using a questionnaire containing four sections: general information, ABE risk assessment, conduct in case of ABE and prevention evaluation.

Results One hundred people responded to the questionnaire, with 52 physicians and 48 paramedics. The most common acts were the pose of catheters, followed by venous sampling and the attachment of infusions. Respectively, 65% and 61% of the respondents brought up the concept of recapping and manual mismatching of needles. Thirty two doctors and 32 nurses were victims of ABE, 59 were puncture cases and 22 were projection accidents. Twenty-eight of them were in an emergency situation and 23 were in front of a patient who was difficult to prick. Thirty participants had received training on ABE.

Discussion in a French epidemiological study, they found that 70.2% of the ABE in dialysis were punctures, which matches our results (70%). They also found that 63% of ABE were preventable only by respecting standard precautions and

the use of safety equipment, which can also be true for us since we found that our participants conserve some risky habits such as recapping and manual needle mismatching.

Conclusion Steady efforts should be taken to counter attack the growing numbers of ABE. We need to reinforce information and training methods aimed at healthcare workers, and we also have to promote vaccination in healthcare settings.

1471 **OCCUPATIONAL EXPOSURE TO BLOOD AND BODY FLUIDS: KNOWLEDGE, ATTITUDE AND PRACTICES AMONG NURSES AT IBN ROCHD UNIVERSITY HOSPITAL OF CASABLANCA**

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Introduction Our study was conducted to describe prevalence and risk factors for occupational exposure to blood and body fluids (BBF) among nurses and to evaluate their knowledge, attitude and practices concerning blood-borne pathogens and adherence to universal safety precautions.

Methods From March 2016 to October 2016, we've conducted a survey amongst nurses working at Ibn Rochd University Hospital of Casablanca. The questionnaire recorded socio demographic characteristics, information about working experience, questions assessing knowledge about blood-borne pathogens, the action to be taken after an accident and questions about standard precautions.

Results We had 110 respondents, 74,5% have been working for more than a year, 58,3% never had training courses about occupational exposure to BBF and 40,4% had already experienced at least once in their working life an accident exposing them to BBF. Of those, only 7 reported the accident at every time. Only 9%, 6,3% and 9,9% knew the respective seroconversion rates for HBV, HCV and HIV and 37,6% admitted never hearing about universal precautions.

Discussion Overall, participants' knowledge about BBF exposure accidents was inadequate. we also found that some participants did not know about the right procedures to take after being exposed. We thought that this can be placed on the lack of information, so we've decided to conduct this survey before and after an informational course that we've organised at the occupational health department. Unfortunately, we couldn't gather enough data after the course because of the lack of respondents.

Conclusion Health care workers should be made aware of the risks of infection they may acquire from these accidents by educating them while they're still students. Additional educational courses should be provided at a regular basis to enhance the awareness and help the workers stay up to date. HBV vaccination should be encouraged for nurses before taking any practical training.

1484 **OCCUPATIONAL HEALTH DEVELOPMENTS IN KENYA'S HEALTH SECTOR**

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Introduction The advancement in healthcare is a product of international and local policies, guidelines and recommendations. Occupational Health is a key aspect in sustainable development by ensuring safe work environment and a motivated healthy workforce. Focus has been directed more on factory set up and less on health sector. Recent developments internationally and locally strive at provision of occupational health services to workers in all sectors. This paper review aimed at finding out the developments in occupational health in the health sector in Kenya.

Method The study utilised secondary data. These were obtained from local, national and international organisations. International information obtained from science publication, ILO, WHO, ICOH and other organisations advocating for best practices. National policies, policy guidelines and other grey literature and government publications from Ministries Labour and Ministry of Health were utilised.

Results The interventions to protect the health of healthcare workers include legislations, guidelines and training on occupational safety and health; Infection prevention and control; healthcare waste management; Vaccinations and post exposure prophylaxis. Kenya has progressed from her first legislation on occupational health that focused only on factories to current target of all workplaces. Healthcare workers' safety and health took centre stage with the publication of occupational safety and health risk assessment report in February 2013. It was a product of nationwide survey on state owned health facilities that revealed several health hazards faced by healthcare workers.

Discussion There are notable advancements in occupational Health in health sector in Kenya. This has been guided mainly by recommendations, resolutions and conventions of WHO and ILO. The transition from Factories Ordinance of 1950, to current Occupational Safety and Health Act, 2007 and Work Injury Benefits Act of 2007 has contributed to better enforcements in the health sector. Slow progress may be attributed to funding and human resource limitations

1508 **IS HOSPITAL SANITATION PERSONNEL EXPOSED TO ANTINEOPLASTIC AGENTS?**

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Introduction Exposure to antineoplastic drugs (ANPs) occurs mainly through dermal contact. In hospital settings, pharmacy and nursing personnel are considered the most exposed workers and receive training on handling dangerous drugs. There is, however, little data on exposure of hospital sanitation (HS) personnel. Our main objective is to document the potential exposure of HS personnel by exploring surface contamination.

Methods Following a preliminary visit to identify target surfaces, 75 wipe samples were taken on surfaces often touched by the HS personnel and 21 samples on other hi-touch surfaces, in three oncology departments: pharmacy, outpatient clinic and hospital ward. Sampled areas varied from 160–1700 cm². A few hand wipe samples were also collected to explore skin