

Among 4,972 female employees aged 21 to 64 years, 74% had at least one Pap test within the past three years. Pap test utilisation was higher among employees aged 21 to 39 years (84%) compared to employees aged 40 to 49 years (76%) and 50 to 64 years (70%). Pap test utilisation was higher among employees with day work schedules (75%) compared to those with rotating work schedules (62%).

**Conclusion** More than one-half of female employees utilised recommended breast and cervical cancer screening tests; however, in the US population, the prevalence of screening mammography and Pap tests was 72% and 83%, respectively. Breast and cervical cancer screening for this insured employee cohort was slightly lower relative to the general US female population.

## Session: V. Health care

### 166 THE CORRELATION BETWEEN WORKING CONDITIONS AND HEALTH STATUS OF NURSING PERSONNEL IN NURSING HOMES IN TAIWAN

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**Objectives** To understand working conditions and potential occupational hazards among nursing personnel (registered nurses and nursing assistants) of nursing homes.

**Methods** A self-administered questionnaire was used to identify the hazards in nursing homes. Chinese Job Content Questionnaire, Chinese Copenhagen Burnout Inventory, and Chinese Nordic Musculoskeletal Questionnaire were used to measure the health status of nursing personnel. An expert focus group and two field visits to nursing home were performed to better understand the potential occupational hazards of nursing homes.

**Results** A total of 477 eligible questionnaires were completed and returned for final analysis. For biological hazards, needle-stick injuries were associated with high job strain of registered nurses. In regard to psychosocial hazards, for registered nurses, low level of employment security was associated with high personal burnout. For nursing assistants, it was associated with high personal burnout, work burnout, and client burnout. Low level of workplace justice was the risk factor for high personal burnout, work burnout of nursing personnel. For ergonomic hazards, the prevalence of musculoskeletal discomforts was 94.8%. Standing  $\geq 6$  hours was highly associated with high job strain for registered nurses. Twisting waist  $\geq 20$  times during work was also related to musculoskeletal discomforts in the past year.

**Conclusions** This study has identified that the work environment of nursing homes would affect health status of nursing personnel in different aspects. To minimise those health effects on nursing home staff, improving the working environment practically and designing educational programs in preventing occupationally induced harms are warranted. A periodical evaluation system is also suggested, to better understand the psychosocial conditions of nursing home staff.

### 167 OCCUPATIONAL RISK ASSESSMENT AND RISK MANAGEMENT OF ANTINEOPLASTIC DRUGS IN ACUTE CARE SETTINGS

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**Background** Antineoplastic drugs (ADs) that are carcinogenic, teratogenic and mutagenic are prescribed to manage cancer and immune diseases. Through patient care activities, many health-care workers (HCWs) are routinely exposed to ADs.

These drugs are associated with secondary cancers along with established evidence on adverse occupational reproductive outcomes but due to lack of precise exposure assessment tools, evidence regarding occupational cancer risks following long term occupational exposures is limited and there is concern for additional risk due to interaction between multiple drug exposures.

Despite safe handling guidelines, recent evidence describes continued exposure to ADs among HCWs, in particular pharmacists and nurses, and also suggest a wider range of hospital occupations may be at risk.

**Methods** We conducted:

Systematic review of evidence for biological exposures to cyclophosphamide among HCWs and lifetime cancer risks assessments.

Observations and job shadowing of local oncology personnel performing associated tasks. The HCWs' interactions with each other and their environment were monitored for transmission of contamination.

Discussions with stakeholders evaluated the impact of policies, procedures and settings on HCWs' exposures.

**Results** HCW's AD urinary contamination levels have been decreasing over the years. Animal and human models were used to quantify the occupational lifetime risks for cancer. Results based on pharmacists and nurses suggest elevated lifetime risks for bladder cancer and leukaemia.

Observations suggest that despite precautionary actions, exposures cannot be controlled without considering the entire hospital AD network. Interviews of stakeholders confirmed the existence of gaps that enable contamination.

**Conclusions** The entire health care facility should be investigated to address gaps in the control of AD exposures through network analysis of contacts and probabilities for contamination for each AD related task; technological improvements are needed for safer preparation, delivery, administration and disposal of ADs; changes in policies are required to address the entire AD system, from 'cradle to grave'.

### 168 WORK ABILITY AND FATIGUE AMONG NURSING PERSONNEL WITH AND WITHOUT WORK RESTRICTION

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**Objective** The inadequate conditions of nursing work have been associated with illness of workers and, consequently, decreasing the Work Ability Index (WAI) and higher levels of fatigue. Often it is observed that sickened workers continue working, performing their activities with restrictions by physical or mental health problems. Thus, we became interested in verifying the association between the work ability index and fatigue among workers who have restriction to perform daily activities or not.

**Methods** This is a cross-sectional epidemiological study, with 100 workers of population. It was conducted in medical and surgical units of a University Hospital in Sao Paulo-Brazil. For data collection was applied the WAI and Chalder Fatigue Scale. Data analysis considered the Pearson correlation coefficient to associate WAI and fatigue, and analysis of variance and chi-square test to investigate association between work restriction, gender and working hours.