smokers. The rate of taking caffeinated beverages was 90.4%, of which 75.5% were taking six or more cups a day. In the form of working for 14–15 hours a day alone and working in fixed night shift, more than 6 cups were consumed.

Taxi drivers are forced to work long hours on their own due to their low wage structure, and the frequency of smoking and caffeine ingestion is very high in order to maintain long working hours. In order to improve this situation, the introduction of the monthly salary system and regulation of working time should be applied.

P.1.18 FACTORS RELATED TO LOWER URINARY TRACT SYMPTOMS OF FEMALE WORKERS IN THE ELECTRONIC PARTS INDUSTRY IN KHON KAEN PROVINCE

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Background The lower urinary tract symptoms (LUTS) are more common in women than men. The causes of LUTS come from many factors. Working factor might be one of them. Leading to a study of working factors and non-working factors related to LUTS at electronic parts factory in Khon Kaen province.
Methods The case-control study was performed. The total of 236 cases (female worker who has at least one symptom of LUTS) and 236 controls (female workers who don't have the symptoms) was done by simple random sampling. Research tool is the self-administered questionnaire. Data were analyzed by SPSS Version 19, EpiInfo for calculate odds ratio, 95% CI , Pearson's chi-square test and Mann-Whitney U test.
Results Conveyor does not statistically significant related to LUTS(AOR=0.88, 95% Cl (0.59,1.30). Factors that significantly related to LUTS are 1.History of LUTS in a last year [AOR=4.80, 95% CI (2.64,8.73)] 2. inadequate number of drinking water glasses [AOR=2.15, 95% CI (1.06,4.36)] 3. inadequate number of toilet [AOR=1.97, 95% CI(1.24,1.97)] 4. Holding bladder [AOR=1.56, 95% CI(1.24,1.97)].
Conclusion Conveyor is not a statistically significant factor for LUTS. Statistically significant factors related to LUTS are history of LUTS in a last year, insufficient number of glasses, insufficient number of toilet and holding bladder.

P.1.19 INCREASED BENEFIT GENEROSITY AND THE IMPACT ON WORKERS' COMPENSATION CLAIMING BEHAVIOUR: AN INTERRUPTED TIME SERIES STUDY IN VICTORIA, AUSTRALIA

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Objective To measure the effect of legislated increases to workers' compensation benefits on claiming behaviour.
Methods Interrupted time series of workers' compensation claims in Victoria, Australia (2008–2012), assessing 1) the overall effect of the legislation and 2) raising the wage replacement cap on higher earners, by condition type, in reference to a comparator of other Australian workers' compensation jurisdictions.
Results Overall claiming increased 11.7%, driven largely by musculoskeletal condition claims. There was no detectable effect on disability duration overall, though back/neck conditions were up 26.9%. Among higher earners, there was mixed evidence of an increase in claiming, though disability durations were up 32.9%, which was also driven by back/neck conditions. There was mixed evidence of an effect on mental health claims, suggesting either no response or a negative response to benefit generosity.
Conclusions Findings mainly align with existing evidence: more generous benefits increase claiming and disability durations, primarily driven by back/neck musculoskeletal conditions. However, some mixed findings by injury group and among higher earners raise questions about confounders such as co-occurring events.

P.1.20 TRENDS IN PREVALENCE OF OBESITY ACCORDING TO OCCUPATIONAL GROUP : THE KOREAN NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

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Objectives This study was designed to provide recent trends of obesity among workers in Korea, and identify whether there was difference across occupational group.
Methods We used data from Korean National Health and Nutrition Examination survey phase I to VI (1998–2015) to analyze trends in prevalence of obesity in Korean adult workers. Obesity was defined as a BMI of 25 kg/m2 or higher. Occupation was classified into 3 groups; a) non-manual worker, b) service/sales worker, c) manual worker.
Result During the period from KNHANES phase I to VI, the prevalence of obesity in male workers increased in all occupations as a whole (31.1% to 39.5% in manual worker, 32.3% to 38.2% in service/sales worker, 25.3% to 39.7% in manual worker). In contrast, female workers did not show a particular tendency except for a significantly decreasing in the prevalence rate in service/sales workers (30.8% to 23.9%, p for trend 0.0048).
Conclusions The trends of obesity prevalence by gender and occupation were different. Especially for male manual-workers, the prevalence rate has increased steadily during the period, while it has decreased steadily in female sales/service workers. These results can be used to select vulnerable groups that can be applied to obesity prevention programs first.

P.1.21 THE ESTABLISHMENT OF A COHORT STUDY IN A SEMICONDUCTOR COMPANY OF SOUTH KOREA

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We have designed a ten-year prospective cohort study in semiconductor workers of South Korea. We aimed to determine the relationship between occupational exposure

and not only cancers but also diseases related to reproductive toxicity such as spontaneous abortion and others. Further, we're planning to establish a monitoring and surveillance system for the known and the unknown hazards like unexpected by-products. We were approved from Korea National Institute for Bioethics Policy (KoNIBP) for cohort establishment in July 2017. We held cohort information session of over two hundred times for entire employees. In these sessions, the employees were encouraged to participate to the cohort study with full explanation related to the establishment of cohort system including the necessity, value, and vision of the system. The consent form was included specific sub-categories depending on the characteristics and source of personal and sensitive information to be used. A total of 22 490 employees were agreed to participate to SHE (SKHynix Employees) cohort (the participation rate: 93 percent) and we built up the foundation of the cohort with these higher rates. Various data included in the consent form, such as personnel information, health examination information, and job exposure matrix (JEM) and others were collected and refined to identify health status of our employees. The cohort was built on the basis of the need of our own healthcare system, and the establishment and the analyses of cohort DB are expected to deduct of the high risk group through tracking and monitoring for risk factors and major diseases. It is also expected proactive prevention through blocking potential risks.

P.1.23 GAPS BETWEEN INTERNATIONAL CONVENTIONS AND NATIONAL ASBESTOS BAN POLICIES: A GLOBAL PERSPECTIVE

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Introduction There is an international consensus that the most efficient way to eliminate asbestos-related diseases is to stop using asbestos. However, 80% of the global population lives in countries that lack any national policy that achieves a total ban on asbestos. We investigated whether national policies were in line with international conventions and identified countries that lag behind the global trend toward a total asbestos ban.

Methods We obtained data on the year that each country implemented policies that ban chrysotile, crocidolite, and amosite. We also obtained the list of countries that have ratified the C162 Asbestos Convention and the Basel Convention, and their date of ratification. Data retrieved from the search databases were compiled for statistical analysis. We calculated the numbers and proportions of countries enforcing total bans, partial bans, and no bans.

Results As of 2018, there were 62 countries implemented the total asbestos ban policy. Countries that ratified both conventions and countries that ratified either one or unratified any convention, we found the former group had a higher proportion of implementing total ban compared to the latter group (65% vs. 41%, p-value<0.05). However, some countries, such as Russia and Kazakhstan, are still among the biggest producers of asbestos, despite they have ratified C162. Asbestos may have been consumed longer in countries not ratifying conventions than those ratifying conventions.

Conclusions Historical asbestos consumption and loose regulations have introduced challenges to eliminate asbestos-related diseases. Although several countries have reoriented the national policy in line with the global trend of banning all types and forms of asbestos, the gap between adopting interventional conventions and developing national policies remain, warranting efforts to analyze driving forces behind successful political processes to ratify the international conventions, establish asbestos control limits, and eventually create a national policy for a total asbestos ban.

P.1.24 THE DEVELOPMENT AND IMPACT OF POLICIES AND RESEARCH FOR PREVENTING AND RECOGNIZING OVERWORK-RELATED CARDIOVASCULAR DISEASE IN TAIWAN

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Introduction Overwork-related cardiovascular and cerebrovascular disease (CVD) is an emerging occupational and public health issue in East Asian societies with a substantial impact on workers' rights and labor standards. To eliminate exposure to work-related risk factors and prevent overwork-related CVD, establishing national policy is a key step. We investigated the development and impact of policies and research regarding overwork-related CVD in recent years in Taiwan.

Methods We collected information regarding government policies that aimed to prevent and recognize overwork-related CVD. Among the risk factors, long working hours have been widely adopted as a quantitative measure to recognize CVD as overwork-related or not. We also collected data on the number of overwork-related CVD cases and average working hours for each industry from 2006 to 2017.

Results In Taiwan, overwork-related CVD 79% of all deaths due to occupational diseases in 2017, although it accounted for 13% of all cases of occupational diseases. Taiwanese workers have long working hours compared to those in other countries, but Taiwan did not have official criteria for recognizing overwork-related diseases until 1991, and it did not recognize its first case until 2006 after several onsets of CVD reported on the news. Our estimation showed an under-recognition problem in less severe outcomes (i.e., illness). We also found variations in CVD risks across industries, with the higher risk in transportation and information.

Conclusions National policy changes for preventing overwork were pushed by insightful scholars, labor unions, nongovernmental organizations, and legislators. Clear criteria for recognizing overwork-related CVD can help occupational physicians and industrial hygienists to assess the workers' working characteristics more objectively. Although Taiwanese government has adopted the criteria for recognizing overwork-related CVD from Japan, the underreporting of less severe outcomes and industry disparities warrants further research to explore causal mechanisms and policies to narrow the gaps.