finger (24%). The most frequent user group was machinery (15%), followed by chemical agents (14%). 35 thousand victims were nursing technicians (6%). 18.8 thousand occurred in adolescents. Men were 60% and in the age group 18–24 years were 672 thousand. In women, the most frequent age group was 30–34 years.

Conclusion Analyzing periodic data and from different sources can contribute to a profile of work accidents with the implementation of public policies in Brazil.

P-134 COVID-19: ANALYSIS OF NOTIFICATIONS ACCORDING TO SOCIAL SECURITY BENEFITS AND ACCIDENTS AT WORK IN BRAZIL IN 2020

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Introduction On March 11, 2020, the World Health Organization declared the existence of a pandemic by SARS-CoV-2. On May 10, 2021, Brazil had reached the 410,000 mark, becoming the second country in number of deaths from COVID-19 and more than 15 million infected. COVID-19 generates withdrawal from work activities and consequent social security benefits. Knowing the profile of employees and benefits can contribute to a better overview of occupational approaches to COVID-19.

Objective To analyze social security benefits generated by COVID-19 leave in Brazil.

Methodology Descriptive analysis of data from the Observatory of Safety and Health at Work, in the period 2020, referring to social security benefits by COVID-19, with a comparative analysis of the year 2019. All social security gaps were considered. Used ICD - 10 = U07 and B34. Data analyzed: state of Brazil, occupation, economic activity, notification with 'report of work accident - CAT', age, gender, economic sector.

Results 50 thousands were dismissed from social security benefits in 2020 according to CID U07 and B34. The state of Sao Paulo had the highest frequency with 36%. Men were 68%. The most prevalent economic sector was hospital (15%) and the occupation was nursing technicians (38%) The most frequent age group in men was 18–24 years and in women, it was 35 to 39 years.

Conclusion Occupational epidemiology acting in the analysis of secondary, social security data on COVID-19 can contribute to the definition of public policies, expanding health promotion and prevention.

P-139 COMPARATIVE ANALYSIS OF THE FRENCH OCCUPATIONAL EXPOSURE DATABASES COLCHIC AND Scola

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Objectives In France, two occupational exposure databases with different goals co-exist. Colchic was built to store measurements from prevention activities since 1987, while Scola

contains measurements from compliance monitoring since 2007. We aimed to compare exposure levels between these databases targeting the same population of workers.

Methods Despite their different objectives, both databases share the same structure. We selected personal measurements with a sampling duration ≤ 12 hours of airborne chemical substances with $\geq 1,000$ results in each database between 2007 and 2015 and combined into a single dataset. We used Tobit models to measure associations between log-transformed concentrations and six predictors (sampling year and duration, global ventilation, number of workers, personal protective equipment (PPE) and region) for each agent. We combined agent-specific models using meta-analytic approaches. We assessed average differences between Colchic and Scola for four prediction scenarios based on sampling year and duration.

Results We selected 239,968 measurements (25% from Colchic and 75% from Scola) across fifteen substances (66% organic solvents, 27% dusts, and 7% metals). The most prevalent agents were wood dust ($n=42,193$), respirable dust ($n=25,299$) and quartz ($n=23,774$). Non-detects represented 45% of all measurements. PPE, sampling year and duration were the main predictors of exposure levels. For 2007, predicted exposure levels in Scola were 2.3 times lower than in Colchic, regardless of sampling duration. This difference decreased in recent years: predicted exposure levels for 2015 were 1.25 times higher in Scola than Colchic for a sampling duration of 30 minutes, and 1.18 times lower in Scola than Colchic for a duration of 240 minutes.

Conclusions Colchic and Scola both represent important sources of information on historical and current occupational exposures in France. Despite a notable early difference in average exposure levels between Colchic and Scola, our results suggest that the contrasts in exposure are getting smaller over time.

P-150 PESTICIDE EXPOSURE OF OPERATORS DURING TREATMENT TASKS IN APPLE GROWING: RESULTS FROM THE CANEPA STUDY IN FRANCE

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Introduction Although apple trees are heavily sprayed, few studies are available on pesticide exposures of workers in apple orchard. However, these data are crucial for assessing the health impact of such exposures.

Objectives The CANEPA study was performed to measure pesticide exposures during treatment tasks in apple orchard and to identify their determinants.

Methods A non-controlled field study was conducted in apple orchards in four regions of France in 2016–2017. We measured operators' external contamination to captan and dithianon, two fungicides representative of pesticide use in apple growing. Measurements of contamination were performed during mixing/loading, spraying and equipment cleaning tasks, following the OECD guidelines with cotton pads placed onto 11 body areas, cotton gloves or hand rinsing

and personal air sampling pump equipped with XAD-2 filters. In parallel, we performed detailed observations of work characteristics on the whole day and measured residues on various surfaces.

Results We observed 30 treatment days corresponding to 52 mixing/loading, 52 spraying and 12 equipment cleaning tasks. The median daily dermal contamination was 5.5 mg for captan and 3.3 mg for dithianon. The average contribution of each phase to the daily dermal contamination was 41.5% for mixing/loading, 29.6% for spraying and 33.0% for cleaning. During mixing/loading, the major determinants of the contamination were related to the use of gloves, the product handling and the characteristics of the spraying equipment. During spraying, dermal contamination was strongly correlated to the spraying equipment (e.g. type and age of the sprayer) and the characteristics of the orchard (height of trees, distance between rows). The daily contamination was also correlated to these parameters.

Conclusion Key determinants of exposure will be used to build prevention messages to improve the safety of operators during treatment operations, especially during mixing and cleaning, the most contaminant tasks. They will also be relevant to build questionnaires for epidemiological studies.

P-155

OCCUPATIONAL EXPOSURE TO ORGANOCHLORINE INSECTICIDES AND PROSTATE CANCER RISK IN THE AGRICULTURE AND CANCER (AGRICAN) COHORT

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Introduction Prostate cancer incidence ranks 2nd among men worldwide. Farming and pesticide use have been repeatedly and consistently associated with prostate cancer risk, with suggestion of the role of organochlorine pesticides, but results on individual pesticides remain controversial.

Objectives We assessed associations between prostate cancer and agricultural exposure to organochlorine insecticides (as a group and considering individual pesticides: aldrin, chlordane, HCH, dieldrin, lindane, heptachlore, DDT, DDD, endosulfan, metoxychlore, SPC, toxaphen, chlorfenethol, chlorobenzilate, dicofol, bromopropylate).

Methods Data on pesticide use on 10 crops, including years of beginning and ending, were collected for 81,960 men from the enrolment questionnaire of AGRICAN. Incident prostate cancer cases were identified through linkage with cancer registries. Exposure to organochlorine insecticides was assessed using the crop-exposure matrix PESTIMAT. Hazard Ratios (HR and 95%CI) were estimated using Cox models with attained age as time scale.

Results Until 2015, 3,535 prostate cancers were diagnosed. We found a slight increase in the risk of prostate cancer in men diagnosed until 2009 exposed to organochlorines (HR=1.11 [0.96–1.30]), but the trend disappeared with 6 additional years of follow-up (HR=0.95 [0.87–1.05]). This result was also globally found when considering individual pesticides. But for substances still in use after 1980 (lindane, dicofol, endosulfan, toxaphen), some increases were still observed with longer

follow-up: for lindane used on wheat/barley for ≥ 40 years (HR=1.27 [1.01–1.58]), on rape for ≥ 30 years (HR=1.52 [0.86–2.70]), on sunflower for ≥ 10 years (HR=1.14 [0.87–1.51]) and on vineyard for ≥ 30 years (HR=1.09 [0.90–1.32]), for dicofol used ≥ 40 years on vineyards (HR=1.17 [0.89–1.53]), and for endosulfan used on fruit-growing (HR=1.16 [0.95–1.41]).

Conclusions The increased risk of prostate cancer associated with organochlorines initially observed tended to disappear with follow-up duration, except for some substances still in use in the 1980s and 1990s. Explanations could be i) the distance between last exposure for some organochlorines and cancer diagnosis, ii) changes in the exposure intensity due to evolution of practices.

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WORK-RELATED MUSCULOSKELETAL DISORDERS OF THE UPPER LIMB IN PRACTITIONERS IN THE DENTAL TEACHING CLINIC OF TUNISIA.

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Introduction Musculoskeletal disorders represent an important occupational health issue in Dentistry. Awkward postures as well as repetitive motion and the lack of ergonomic tools and workstation expose to a variety of musculoskeletal disorders affecting dentists' quality of life. Therefore, ergonomic recommendations should be applied since the beginning of the university teaching and training.

Objectives The aims of our study were to assess the prevalence of upper limb MSDs among dental practitioners in the dental teaching clinic of Monastir and to identify the social, occupational, ergonomic, and psychosocial risk factors of their occurrence.

Methods It is a cross-sectional study, that interested 260 dental practitioners working in the hospital academic center of dentistry. It was based on a self-administered questionnaire exploring the socio-demographic, occupational and ergonomic data. It was completed by the standardized Nordic Questionnaire and Karasek one.

Results Ninety six percent (96.4%) of the participants reported upper limb MSDs including 95.2% with multifocal locations. The most common painful site was the elbow. The presence of upper limb MSDs was significantly correlated with a high number of patients under care ($p=10^{-3}$), better social support ($p=0.04$), single status ($p=0.03$) and the position as a dental trainee ($p=0.006$). There is no significant difference in terms of upper limb MSD between subjects in a Job Strain situation and those who were not. Furthermore, no ergonomic determinants were found with the advent of upper limb MSDs.

Conclusion Upper limb MSDs risk among dental practitioners at the dental academic center of dentistry of Monastir is real and frequent. Prevention of this occupational issue should include ergonomic workshops in dental university course and awareness risk sessions. Prevention is obviously based on tools, movement, and space Ergonomics.