

immunocompromised, due to exposure to agrotoxics, this population is more susceptible to COVID-19, a situation that is aggravated by workplaces and working conditions, which place them at risk, due to frequent circulation and the need for entry into residences.

**Method** This descriptive study was part of a multicenter research with Endemic Workers from the State of Rio de Janeiro, Brazil. To investigate the work during the pandemic we used an online questionnaire, structured with open and closed questions.

**Results** Preliminary results from the 140 responses to the questionnaire demonstrate that: 78% of the Endemic Workers reported diagnosed disease and from these, 70% had comorbidities. The most frequent are hypertension (49%), diabetes (22%), respiratory problems (22%) and malfunction of the liver and kidneys (17%). Although 88% did not have a diagnosis of COVID-19, 64% reported having co-workers and/or family members with COVID-19. Regarding remote work: 2% reported working at home, 29% were working in scale and/or alternate time and 53% were working full time. Workers who stayed the longest time in remote work (five months) represented only 8%, with 31% remaining in full time presential work during the period in which isolation and detachment measures began in Brazil.

**Conclusion** Protective measures of the health of these workers and assisting this population to prevent the transmission of SARS-Cov-2, are necessary to implement health protection policies, including other exposures at work, such as agrotoxics.

#### P-432 CHEMICAL EXPOSURE TO PESTICIDES (AGROTOXICS) OF ENDEMIC WORKERS IN THE STATE OF RIO DE JANEIRO, BRAZIL

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**Introduction** The Brazilian vector control is characterized by intensive use of pesticides (agrotoxics) such as organophosphates, carbamates, pyrethroids and benzoylureas. Until the 1990s, organochlorines were also used. Some of these substances have already been banned, in other countries, but continue to be used in Brazil and are associated with several harmful health effects such as neurotoxicity and carcinogenicity. Endemic workers have been continuously exposed for decades and have a high rate of illness and death from cancer.

**Objective** To identify chemical exposure by agrotoxics in the work process of endemic workers in the state of Rio de Janeiro, Brazil.

**Method** Observational, descriptive, cross-sectional and multi-center study. 139 questionnaires answered remotely by the endemic workers in the state of Rio de Janeiro, Brazil were analyzed.

**Results** 61.2% worked manipulating/applying agrotoxics. 39.6% worked between 20–29 years (mean = 15.9; SD = 12.4) in direct contact with agrotoxics. 79.1% had already worked directly with agrotoxics at some point. The most commonly used agrotoxics between 2010 and 2020 were: *Bacillus*

*thuringiensis* (bacterial larvicide) (40.7%); pyriproxifem (pyridyloxypropyl ether) (42.1%); benzoylphenylureas: diflubenzuron (35.0%) e novaluron (25.7%); pyrethroids cypermethrin (33.6%), deltamethrin (12.1%) e permethrin (9.3%); organophosphates: malathion (33.6%), temephos (28.6%) e fenitrothion (16.4%); and bendiocarb (carbamate) (9.3%). 71.9% reported direct contact of the agrotoxics with the skin. The most used individual protection equipment (IPE) were gloves (42.9%), boots (31.4%) and overalls (17.9%). 47.5% did not use or received IPE from employer. 53.2% of workers didn't have training and 43.9% of those who did, didn't consider it sufficient. 98.6% washed work clothes at home. 69.8% reported symptoms of intoxication after contact with agrotoxics (skin irritation, burning in the nose and mouth, difficulty breathing, vomiting or diarrhea, weakness, headache, nausea, fainting).

**Conclusion** Endemic workers have been exposed acutely and chronically for decades to various agrotoxics. Changes in the work process and chemical-dependent vector control are required.

#### P-434 'NIGHT WORK: RELATIONSHIP WITH THE RISK OF DEVELOPMENT OF DM, CARDIOVASCULAR DISEASES IN HEALTH WORKERS.'

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**Introduction** Shift work has become essential to our modern 24-hour society. While night workers have been found to experience an increased risk of cardiometabolic diseases, such as diabetes mellitus (DM) and cardiovascular disease (CVD). Conceptual hypothesis: The night shift reduces melatonin levels and increases the risk of type II DM and cardiovascular diseases in health workers in a hospital.

**Objective** To analyze the association between low melatonin levels and increased risk of DM and cardiovascular diseases, and night shift in workers of a hospital.

**Methods** We used an analytical, longitudinal, retrospective study over a 5-year follow-up of a cohort in which the results of workers suffering from DM and cardiovascular diseases are compared in two groups: a) One group, exposed to night shifts, and b) a second group, not exposed to night shifts. The population of this study will be made up of health workers who voluntarily attend health examinations (ES) of the Occupational Service of Hospital from January 1, 2009 to December 31, 2019, including the apparently healthy and labor-active working population, between the ages of 19 and 65.

**Results and conclusion are forthcoming**

#### P-435 MORBIDITY AND MORTALITY OF WORKERS IN THE VECTOR CONTROL OF THE STATE OF RIO DE JANEIRO, BRAZIL

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**Introduction** Brazilian vector control, characterized by the intensive use of pesticides (agrotoxic), has resulted in decades