



# Research Repository UCD

<b>Title</b>	COVID-19 and its impact on Irish workplaces – OSH professionals experience and observations of preparation and adaptation
<b>Authors(s)</b>	Buggy, Conor J., Chen, Yanbing, Roe, Mark, Sripaiboonkij, Penpatra, Drummond, Anne, Perrotta, Carla
<b>Publication date</b>	2022-01
<b>Publication information</b>	Buggy, Conor J., Yanbing Chen, Mark Roe, Penpatra Sripaiboonkij, Anne Drummond, and Carla Perrotta. "COVID-19 and Its Impact on Irish Workplaces – OSH Professionals Experience and Observations of Preparation and Adaptation." Elsevier, January 2022. <a href="https://doi.org/10.1016/j.shaw.2021.12.1115">https://doi.org/10.1016/j.shaw.2021.12.1115</a> .
<b>Publisher</b>	Elsevier
<b>Item record/more information</b>	<a href="http://hdl.handle.net/10197/12767">http://hdl.handle.net/10197/12767</a>
<b>Publisher's version (DOI)</b>	<a href="https://doi.org/10.1016/j.shaw.2021.12.1115">10.1016/j.shaw.2021.12.1115</a>

Downloaded 2025-12-04 23:02:31

The UCD community has made this article openly available. Please share how this access benefits you. Your story matters! (@ucd\_oa)



© Some rights reserved. For more information

Results: The WUD costs relative to the total wage sum were about 7.1% in municipal organizations and 6.4 % in companies. The most significant absolute difference was in sickness absence costs. They were about 27 % higher in public organizations (5.2 % vs 4.1 % of total wage sum). Another statistically significant difference was in occupational health care costs, which were 2.7 times as high in companies as in public organizations (0.3 % vs 0.8 % of the total wage sum). Conclusions: The WUD costs were higher in Finnish municipal organizations than in private companies. Municipalities' higher sickness absence mainly explains the difference, and companies' higher occupational health costs narrow the gap. Efforts must be made to monitor and control the WUD costs so that employees can maintain their workability throughout their careers in both the municipal and private sectors.

089

### **Reincidence Epidemiological Analysis for Positive Covid-19 Cases in Mexico**

*Aidalucia Fajardo-Montiel<sup>1</sup>, Cesar Alejandro Castellanos-Tadeo<sup>2</sup>, Hector Hugo Ulloa Godínez<sup>3</sup>, Hermes Ulises Ramirez-Sanchez<sup>3</sup>, Mario Enrique Garcia-Guadalupe<sup>3</sup>, Faustino Omar Garcia-Concepcion<sup>3</sup>*

<sup>1</sup> Universidad De Guadalajara, Cutonala, Guadalajara, Mexico,

<sup>2</sup> Universidad De Guadalajara, Cucs, Guadalajara, Mexico,

<sup>3</sup> Universidad De Guadalajara, Cucei, Guadalajara, Mexico

The pandemic caused by the SARS-CoV2 virus (COVID-19) represents an increase in the morbidity and mortality rate of the Mexican population, especially in people with health risk factors and associated medical history that despite already had COVID-19, present a second positive test and simultaneously a clinical relapse of the disease.

OBJECTIVES: The epidemiological behavior of the pandemic requires creating challenges and implementing strategies for the prevention and mitigation of contagion risks in the occupationally productive population, prevention and mitigation of contagion is essential to avoid clinical cases of infection and reinfection of the disease in the working population.

METHODOLOGY: Clinical and epidemiological follow-up of positive clinical cases of COVID-19 reinfection (period of more than 90 days) detected by monitoring PCR RT tests.

RESULTS: From a total of (1626 patients) with a positive RT PCR laboratory result, the percentage of clinical relapse and a new positive laboratory test was 1.41% of the population in follow-up. Among the positive cases with a second laboratory test, 60.86% correspond to the male sex, an additional analysis is presented by age and time of reinfection.

DISCUSSION: The analysis of this research finds an association of reinfection with patients with a history of smoking and bronchial asthma. Our study identifies reinfection by running two RT PCR tests separated by a period of more than 90 days from the initial infection resolution.

CONCLUSIONS: The reinfection of COVID 19 occurred in employees after a first period of the disease is possible

090

### **Role of the occupational medicine consultation in the screening of non-communicable diseases**

*Imene Kacem<sup>1</sup>, Mariem Hafsia<sup>1</sup>, Mohamed Kahloul<sup>2</sup>, Anouar Youssef Ben Slama<sup>2</sup>, Mohamed Ajmi<sup>2</sup>, Asma Koubaa<sup>1</sup>, Manelle Makhloufi<sup>1</sup>, Walid Naija<sup>2</sup>, Nejib Mrizak<sup>1</sup>*

<sup>1</sup> Farhat Hached Academic Hospital, Department of Occupational Medicine, Sousse, Tunisia, <sup>2</sup> Sahloul Academic Hospital, Department of anesthesia and intensive care, Sousse, Tunisia

Introduction: Non-communicable diseases (NCDs), including cardiovascular diseases, cancer, diabetes and chronic respiratory diseases, are the leading cause of death and disability worldwide. Periodic medical monitoring of employees is of paramount importance in terms of early detection of these pathologies. Methods: This is a descriptive, retrospective study carried out in the occupational medicine department of the Farhat Hached Academic Hospital, during a two-year-period. It included all the employees of our academic hospital, the employees of rectorate and the employees of the national office of university working in Sousse region and consulting as part of a hiring visit or periodic visit.

Results: The study included, 2012 employees with an average age of  $42 \pm 10.3$  years. Active smoking has been reported in 27% of cases. Overweight and obesity were noted in 68.6% and 29.7% of cases respectively. The pathologies identified during the periodic visits were dyslipidemia (13%), diabetes (9.7%) and hypertension (6.7%). The action to be taken was to advise hygienic and dietetic rules (40.7%) and recourse to specialist advice (29.8%). The independent factors associated with NCDs, at the end of the multivariate analysis, were age greater than 45 years ( $p < 0.002$ ; OR 95% CI: 10.5 [2.4-45.8]) and low socioeconomic level ( $p < 0.001$ ; OR 95% CI: 2.9 [2.1-4]). Male gender was a protective factor ( $p < 0.001$  OR 95% CI: 0.5 [0.4-0.7]). Conclusion: The consequences of NCDs are often dreadful, justifying early detection and treatment, especially during periodic visits, and this within the framework of the societal role of occupational medicine.

### **06. EMERGENCY PREPAREDNESS AND RESPONSE IN OCCUPATIONAL HEALTH**

091

### **COVID-19 and its impact on Irish workplaces – OSH professionals experience and observations of preparation and adaptation**

*Conor Buggy<sup>1</sup>, Yanbing Chen<sup>2</sup>, Mark Roe<sup>2</sup>, Penpatra Sripaiboonkij<sup>1</sup>, Anne Drummond<sup>1</sup>, Carla Perrotta<sup>2</sup>*

<sup>1</sup> University College Dublin, UCD Centre for Safety and Health at Work, School of Public Health, Physiotherapy and Sports Science, Dublin, Ireland, <sup>2</sup> University College Dublin, School of Public Health, Physiotherapy and Sports Science, Dublin, Ireland

Introduction: An investigation of Irish workplace adaptation to COVID-19 was conducted to assess impact to workers, their organisations and to develop new OSH adaptation mechanisms for future health emergencies.

Materials and Methods: As part of the study, OSH professionals (n=60), each representing their workplace, took part in a series of semi-structured online focus groups. Each focus group incorporated twenty quantitative questions (covering four themes: organisational preparedness; organisational impacts; worker impacts; and the future of OSH) that were answered anonymously via a poll function. Results: 59 participants completed the questions. 58% of workplaces began pandemic preparations prior to COVID-19 emerging in Ireland. 66% of workplaces remained open while 27% were partially closed. 34% of workplaces had more than half their workforce working from home (5% pre-pandemic). 37% of workplaces had a working from home policy with 54% of workplaces having risk assessments for infectious diseases in place prior to the pandemic. 41% of workplaces had identified a viral pandemic scenario as part

of its emergency planning prior to COVID-19. OSH professionals indicated that the majority (63%) of their colleagues understood the control measures instigated as a response to COVID-19 with a greater majority (90%) more willing to accept future workplace changes if they know it is to keep them safe and healthy.

Conclusion: Irish workplaces adapted well to the changing OSH landscape that emerged in response to COVID-19. Irish workplaces are now more likely to be able to adapt and respond well to future public health emergencies.

## 092

### **A comparative empirical analysis of low-cost decontamination methods for filtering facepiece respirators to address stock shortages during the COVID-19 Pandemic**

Tanusha Singh<sup>1</sup>, Thabang Duba<sup>1</sup>, Lufuno Muleba<sup>1</sup>, Onnicah Matuka<sup>1</sup>, Daniel Glaser<sup>2</sup>, Zethembiso Ngcobo<sup>1</sup>, Nisha Naicker<sup>3</sup>, Edith Ratshikhopho<sup>1</sup>, Zubaydah Kirsten<sup>1</sup>, Tobias van Reenen<sup>4</sup>, Zibusiso Masuku<sup>5</sup>, Dikeledi Sinko<sup>6</sup>, Lebogang Ntlailane<sup>6</sup>, Tebogo Nthoke<sup>6</sup>, David Jones<sup>7</sup>, Mary Ross<sup>8</sup>, Pieter du Toit<sup>9</sup>

<sup>1</sup> National Institute for Occupational Health, a division of the National health Laboratory Service, Immunology & Microbiology, Johannesburg, South Africa, <sup>2</sup> Council for Scientific and Industrial Research (CSIR), Engineering, Pretoria, South Africa, <sup>3</sup> University of Johannesburg, Environmental health, Johannesburg, South Africa, <sup>4</sup> Council for Scientific and Industrial Research (CSIR), Built Environment, Pretoria, South Africa, <sup>5</sup> National Institute for Communicable Diseases, a division of the National Health Laboratory Service, Biorisk Division, Johannesburg, South Africa, <sup>6</sup> National Institute for Occupational Health, a division of the National health Laboratory Service, Occupational Hygiene, Johannesburg, South Africa, <sup>7</sup> National Institute for Occupational Health, a division of the National health Laboratory Service, Safety, Health and Environment, Johannesburg, South Africa, <sup>8</sup> University of the Witwatersrand, School of Public Health, Johannesburg, South Africa, <sup>9</sup> National Metrology Institute of South Africa, Scientist: Photometry & Radiometry, Pretoria, South Africa

Introduction: Filtering facepiece respirators (FFRs) reuse practices to address shortages during the COVID-19 pandemic received attention; however, evidence of SARS-CoV-2 inactivation on respirators is limited. Quality FFRs for use during outbreaks remains a priority to protect frontline and essential workers. This study aimed to compare the effectiveness of three relatively inexpensive methods to inactivate SARS-CoV-2 and ensuring respirator performance.

Methods: Seven FFRs inoculated with SARS-CoV-2 were decontaminated with moist heat incubation (MHI), vapourised hydrogen peroxide (VHP), and ultraviolet germicidal irradiation (UVGI). *G.stearothermophilus* bioindicator was used as a control. FFR integrity, efficiency and user fit were assessed on 27 participants for 30 decontamination cycles. Ethical clearance was acquired from the University of the Witwatersrand (M200684).

Results: Most participants failed fit testing for KN95 irrespective of method used except for two individuals. Participants completed more cycles after UVGI compared to VHP decontamination. Only KN95 failed filtration post-MHI, VHP and UVGI treatment. A  $\geq 3$  log reduction of SARS-CoV-2 was achieved using UVGI for worn FFRs (Greenline 5200 FFP2 and Makrite 9500 N95 using MHI; 3M 8810SSA FFP2 using VHP; Greenline 5200 FFP2). UVGI and VHP methods achieved a 6 log reduction of *G.stearothermophilus*.

Conclusion: Some FFRs could withstand 30 cycles of UVGI and VHP processing without diminishing filtration efficiency or fit. SARS-CoV-2 log reduction varied across the methods and FFRs models emphasizing the importance of validation before reuse during a crisis.

## 093

### **Occupational Medicine in Pandemic Management**

Karmen Bradvica-Kelava<sup>1</sup>, Marina Milakovic<sup>1</sup>, Helena Koren<sup>1</sup>, Marija Bubas<sup>1</sup>

<sup>1</sup> Croatian Institute of Public Health, Division for Occupational Health, Zagreb, Croatia

INTRODUCTION: Vaccination is considered to be the most effective measure in pandemic management and response. In order to be effective, administration of safe vaccine by well-trained health professionals is a priority. During COVID-19 pandemic, a Mobile Occupational Vaccination Team of 8 medical doctors and 4 administrative personnel working in Croatian Institute of Public Health, Division for Occupational Health, organized workplace vaccinations for workers in major Croatian companies.

MATERIAL AND METHODS: Data of vaccines administered by Mobile Occupational Vaccination Team during May 17, 2021 – June 16, 2021, were examined and compared with a total number of vaccines administered in overall Croatian population in the same period.

RESULTS AND CONCLUSIONS: During 1-month period a total of 825 070 COVID-19 vaccine doses were administered in Croatia, while Mobile Occupational Vaccination Team administered 12 049 doses or 1.46 % of all COVID-19 vaccines in the country. A daily average of vaccine doses administered by the Team was 402, or 548 if only working days were included. Having in mind that the Team consisted of only 8 doctors who administered vaccines to the working population, it is clear that doctors in the field of Occupational Medicine, with a will to take action, can be highly effective and have a crucial role in pandemic management and response, which should be considered in future pandemic preparedness planning.

## 094

### **Health Emergency Management in Public Administration: A Reproducible Model to Ensure Environmental Sustainability and Quality of the Spaces for Workers**

Francesca Troiano<sup>1</sup>, Giuseppe Furia<sup>2</sup>, Carmela Puleo<sup>1</sup>, Patrizia Chierchini<sup>2</sup>, Anna Zoppegno<sup>3</sup>, Maddalena Quintili<sup>1</sup>

<sup>1</sup> Local Health Authority Roma 1, Safety, Quality and Risk Management area, Rome, Italy, <sup>2</sup> Local Health Authority Roma 1, Hospital Management area, Rome, Italy, <sup>3</sup> Local Health Authority Roma 1, Health Professionals Area, Rome, Italy

Introduction: During the Covid19 pandemic, standard criteria were defined for the construction of new spaces to be used as vaccination centers, in relation to the goals of the UN 2030 agenda on environmental sustainability and quality of the spaces, for health and for the responsible consumption of resources during the emergency. The aim of this case study is to achieve a reproducible model based on the criteria of economic sustainability of the public administration, potentially expandable in other sectors as cooperation and development.

Materials and Methods: A Rapid Response Team, trained with the WHO guidelines, was established for the definition of the essential requirements of the new vaccination centers, following a specific