



# Post-COVID Challenges in Occupational Medicine as a Branch of Clinical and Educational Medicine

Hrvoje Lalić\* 

Department of Occupational and Sports Medicine, Health Centre Rijeka and Medical Faculty, Rijeka, Croatia

## Abstract

**BACKGROUND:** The COVID-19 pandemic has exhausted the employees of hospital center and had a negative impact on medical students.

**AIM:** The aims are to show the efforts of Occupational Medicine to provide support for healthcare workers and to increase student's interest in O.M.

**MATERIALS AND METHODS:** Out of the total number of employees of the Clinical Hospital Center Rijeka, which is 3500, 275 of them claim for recognition of COVID-19 occupational diseases in 2022. The 6<sup>th</sup>-year medical students of the Rijeka Faculty of Medicine, 130 in total and 22 sanitary engineers were surveyed by the quality service regarding their satisfaction with the Occupational Medicine classes. Statsoft Statistica 10 was used to calculate the results.

**RESULTS:** All HCW are recognized as having COVID-19 as a professional disease. Older age correlated with greater absenteeism. Hospital employees are dissatisfied, tired, they demand work benefits, contraindications for shift work, night work, work in COVID centers, and requesting maternity leave. Many also quit their jobs the hospital management is looking for and hiring new employees, who quickly leave due to difficult working conditions and low incomes. Occupational medicine also has a problem with students. During the pandemic, classes were held online. Interest in classes declined, a small number of students joined the lectures, but all responded to the survey. The answers showed a lack of interest in the Occupational Medicine course. With subsiding of the pandemic, it would be obligatory to continue "live" classes, take students on a tour of industrial facilities, and cancel the failed evaluation of teachers.

**CONCLUSION:** Easing of working conditions for HCW and changes in teaching is necessary.

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**\*Correspondence:** Hrvoje Lalić, Department of Occupational and Sports Medicine, Health Centre Rijeka and Medical Faculty Rijeka, Croatia. E-mail: [hlalic@inet.hr](mailto:hlalic@inet.hr)  
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## Introduction

When COVID-19 appeared at the end of 2019 and at the beginning of 2020 spread around the world, it was a big challenge for healthcare workers [1]. Apart from the optimism of healthcare workers, there were no other resources to combat exhaustion in the COVID-19 centers. Health workers, as middle-aged people with less comorbidity than the rest of the population, suffered less serious consequences of the COVID-19 disease [2].

On the other hand, students as part of society as a whole experienced the above-mentioned events in the form of increased anxiety [3]. They had changed their habits, the time spent lying down, and sleeping increased [4]. Due to the transition to virtual classes, part of the students became worried and lost self-confidence due to the lack of adequate training in the clinical environment [5].

This paper wanted to demonstrate the double pressure on Occupational Medicine-on one hand from medical workers, and on the other from students who have lost enthusiasm and interest except for obtaining an undeserved A grade at the Occupational Medicine examination.

## Examinees and Methods

Processed were statements of 275 health workers of the Clinical Hospital Center, which numbers 3500 employees. Two hundred and thirty-five women and 40 men submitted positive tests for the COVID-19 and in 2022 claimed recognition of an occupational disease.

The statistical analyses were performed using Statistica version 10 (StatSoft, USA), nonparametric groups were assessed with Mann-Whitney U-test and correlation matrices, respectively.

Participation was voluntary and the collected data were part of routine OM practice. The study was approved by the CHC Ethics Committee (decision N0. 01-47/3-3-21) and conducted in accordance with the principles of the Declaration of Helsinki.

The Office for the Quality of Teaching in Occupational Medicine by the Faculty of Medicine obtained survey results based on student responses. Surveys were sent online to students' mobile phones during the last lecture. They asked for simple answers on a scale of 1–5, how satisfied the students are with the topics offered, the accuracy of the lectures, the possibility

of on-line monitoring, the clarity of the lectures, the communication between students and professors, and the usefulness for future careers in practice.

## Results

The employees (in total –235 women and 40 men) were on average  $46.51 \pm 12.27$  years old, and spent on average  $9.90 \pm 6.03$  days on sick leave. According to gender, the men had slightly longer sick leaves than women. (Table 1) Two singled out employees spent 60 days on sick leave due to bilateral pneumonia, that is, 150 days due to pulmonary embolism as a complication from COVID-19. Older employees used more sick leave days, resulting in mild positive correlation  $+ 1.896$ , and the linear-regression analysis (Figure 1).

**Table 1: Average age of respondents by gender and average days of sick leave due to COVID-19 disease**

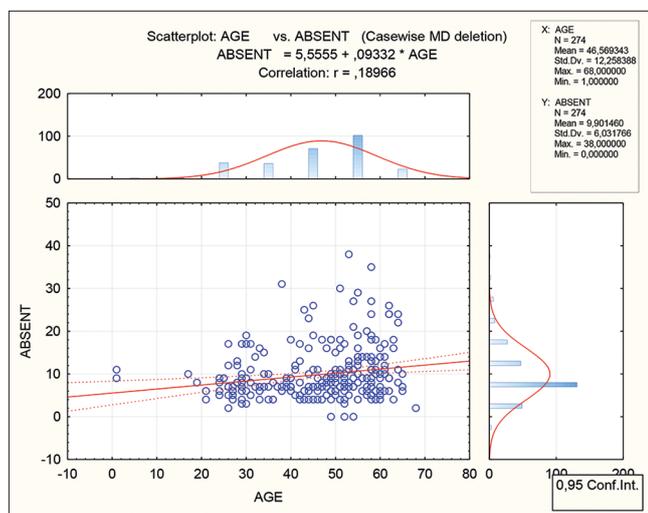
Sex	No. of examinees	Age (mean) years	Absent from work (mean) days
Female	235	44.26	9.79
Male	40	43.7	10.82

No. of examinees, number of examinees; Age (mean) years, Age (mean) years.

The result of the questionnaire-separately filled out by 22 students of the 2<sup>nd</sup> year of sanitary engineering and separately by 130 students of the 6<sup>th</sup> year of medicine-showed a low rate of satisfaction with teaching 2.33% and 3.05% among medical students.

## Discussion

The truth is that the pressure on Occupational Medicine in recent months regarding the recognition of occupational diseases has declined and there are



**Figure 1: The linear-regression analysis showed mild positive correlation between age and absenteeism (days spent on sick-leave)**

only a few claims for the recognition of occupational diseases per week, compared to up to approximately 10 per day during the first 6 months of the pandemic [6].

Mostly, health workers have had a milder form of the COVID-19 disease. In isolated more severe cases as above mentioned two health workers, psychosocial support from the institution's management is needed to enable them to return to the work processes [7]. More severe forms of the disease always result in a longer recovery period [8]. The use of masks as a basic means of protection has proven to be an excellent means of protection for healthcare workers. Antimicrobial mouthwashes and nasal sprays have shown good protection for both patients and healthcare professionals [9]. The biggest problem is that during the worst of the pandemic, some health workers of the hospital center quit their jobs. Vacant positions remained vacant, so quite common one healthcare worker has to endure the workload of several workers.

Occupational Medicine is under increased pressure from medical workers, who continue to work in difficult conditions and demand from Occupational Medicine contraindications for shift work, night work, and maternity leave at the very beginning of pregnancy at the expense of hospital center. This puts Occupational Medicine in an uncomfortable position, because, in one hand, it has to protect the workers but on the other also the work organization, so it often finds itself in the role of a judge who has to carefully weigh "justice." Healthcare reform is on the threshold of revival, the focus is on strengthening the public sector, which should be competitive with the private sector, because the public sector accepts all patients, while the private sector accepts them at will. Since the public sector performs all, even the most difficult tasks, it will be adequately paid, and the employees will mostly stay in state institutions. On the other hand, Occupational Medicine as a teaching base is exposed to the pressure from students that manifested itself during the pandemic. Virtual and hybrid teaching is well thought out, entire platforms for communication with students have been designed [10]. Despite everything, a small number of students accessed online lectures, while a large number readily responded to surveys of the Faculty of Medicine. It turns out that the Occupational Medicine course is not interesting, and 10% followed the program given, that is, classes. Students do not yet have enough knowledge or experience to be able to evaluate what they need, so we have a situation where they behave in this way because it suits them.

In conclusion, returning HCW within the framework of regular work shifts without being burdened with excessive working hours, the introduction of new employees wherever the employees left and subsidizing their deficit and giving appropriate salaries for work equivalent to the private sector, would significantly improve the situation in the Clinical Hospital Center. Occupational medicine, in cooperation with the

Occupational Safety and Health Administration of the Clinical Hospital Center, encouraged the management to find a way out of the above mentioned problems.

Thanks to the revival of live classes and interesting visits to industrial plants, students will again become interested in occupational medicine, without which there is no proper and accurate assessment of work ability.

## Conclusion

OM, as it has shov ed important role in full swing of pandemic, now, when we can talk about the Post-COVID era, proved its significance again. It proved to be the driving firce of changes. With help of Health Centre's Safety at Work Members, the hospital management is made to come to conclusion that the unburdened and satisfied HCWs will happily stay on and practice their humane profession, as well as the medical students whom, when they go back to their practical classes, will again become interested in OM, as an important preventive and educational branch.

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