

Preventive Medical Exam Post Occupational Exposure to Sars-Cov-2 Virus

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Abstract

Introduction: To reduce disease transmission and mortality associated with COVID-19, short-term preparedness planning should include large-scale implementation of measures such as case detection and isolation, contact tracing and tracing, and their quarantine. Healthcare workers, many of them in the red zone, are often subject to occupational exposure to known or suspected sources of COVID-19 during specific medical procedures, mortuary work, or laboratory procedures. The Ministry of Public Health has implemented an action protocol that contemplates the protection of the health of occupationally exposed workers, who must undergo medical check-ups to detect early manifestations of contagion.

Objective: Contribute to the surveillance of the health status of health personnel after occupational exposure to the SARS-CoV-2 coronavirus.

Material and method: The literature on somatic and functional, psychic, psychophysical and psychosocial manifestations of people who suffered from COVID-19 was reviewed, which was useful for the design of a preventive medical evaluation methodology aimed at the early detection of negative manifestations attributable to occupational exposure to the SARS-CoV-2 virus.

Results: A preventive medical examination methodology was developed that investigates clinical and subclinical manifestations caused by the SARS-CoV-2 coronavirus and the psychosocial risks associated with the presence of the biocontaminant in the work environment. In addition to identifying damage, the test will be useful to determine the fitness of personnel to continue performing in jobs with exposure to the SARS-CoV-2 coronavirus.

Keywords: COVID-19; health personnel; medical evaluation; occupational exposure; psychosocial risk

Introduction

The year 2020 began under the threat of an epidemic outbreak of pneumonia of unknown cause that affected people supposedly infected in a market in the city of Wuhan, capital of Hubei province and the most populous in the central area of the Republic. Chinese People's Public The disease continued to spread throughout the world and on January 21 the first patient was reported in the United States of America. On January 30, the director general of the World Health Organization (WHO) declares that the outbreak of the new coronavirus constitutes a Public Health Emergency of International Importance (ESPII). So far there were 98 cases in 18 countries outside of China and no fatalities.

On February 11, the WHO named the disease COVID-19, caused by the SARS-CoV-2 coronavirus. A month later, the WHO decreed that COVID-19 could be considered a pandemic due to the alarming levels of spread and severity. As it was not just a public health crisis, but affected all sectors, he reiterated the call for countries to adopt a whole-of-government, whole-of-society approach, around a comprehensive strategy aimed at preventing

infections, saving lives and minimizing minimize the consequences of the pandemic. The 73rd World Health Assembly passed a resolution to fight COVID-19, highlighting the "disproportionately high human cost on the poor and most vulnerable" and reiterating the importance of a comprehensive approach, a whole-of-government response and of the whole of society, with special attention to vulnerable groups, not only in aspects related to health, but, in general, the negative repercussions on economies and societies, and the consequent "exacerbation of inequalities" within countries and between them. COVID-19 has had a high health cost and has generated a crisis in the health systems of a good part of the countries and territories of the world to face it due to the collapse of intensive medicine services and the deficient care of a considerable number of severe and critical cases, which has contributed to the high mortality associated with the disease [1].

The pandemic has been reported in 189 countries, with more than 88.3 million confirmed cases and 1.9 million of them have died, for a lethality of 2.1%. The American continent is the current epicenter of COVID-19 with 38.8 million confirmed cases (54% of the total cases reported in the world), with 910,487 deaths, for a lethality of 2.34% [2]. The United States ranks

first worldwide, both in terms of infected people and deaths. In Latin America, the most affected countries are Brazil (at the same time third in the world), Colombia, Mexico, Argentina and Peru.

COVID-19 and work

In the general policy framework of the International Labor Organization (ILO), in order to face the COVID-19 crisis, the importance of adopting response measures based on four pillars is underlined, one of which is the protection of workers in their workplace, which consists of reinforcing occupational health and safety (OSH) measures, adapting work modalities (for example, teleworking), preventing discrimination and exclusion, allowing access to healthcare for all and extend the resource to a paid leave. The pandemic has exposed wide deficiencies and inequalities in the world of work and has accentuated them. Women, youth and workers in the informal sector, who were in a very unfavorable situation before the crisis began, have suffered some of its worst consequences.

COVID-19 has posed a tremendous challenge for occupational health and demands the considerable experience of specialists regarding the measures to be implemented in occupational exposure to biological agents that can contribute to a better understanding of the procedures to prevent the spread of the disease in the community and in work environments before and during the de-escalation with the restart of industrial and service activities in which sanitary measures are gradually made more flexible.

The new normality requires from the team in charge of occupational health and safety management not only immediate updating to design and implement intervention strategies on new occupational risks, new forms of organization and employment modalities, as well as instruct on good practices for the prevention of infections by the SARS-CoV-2 coronavirus. There is a long list of jobs that involve direct contact with the public and close physical proximity to others, so you are at higher risk of exposure due to the large number of daily contacts. Among these, certain labor groups (health, social care and sanitation services) stand out, whose role is essential to overcome the pandemic. Healthcare workers, many of them in the red zone, are often subjected to arduous and sometimes dangerous working conditions. Their long hours in intensive care units, lack of personal protective equipment or adequate resources, poor staffing, and intense emotional stress put these workers at increased risk of infection and transmission [3,4].

Occupational exposure is defined as "very high risk" when work is performed in the presence of known or suspected sources of COVID-19 during specific medical procedures, mortuary work, or laboratory procedures. Included in this category are healthcare and morgue workers who perform aerosol-generating procedures or collect/handle specimens from potentially infectious patients or bodies of persons known or suspected to be infected with COVID-19 at the time of delivery. death. While it is classified as "high risk" occupational exposure when it comes to jobs with a high potential for exposure to known or suspected sources of COVID-19, but in this case they do not perform aerosol-generating procedures or handle potentially infectious material, including health care support and care personnel, medical transport, and obituary service workers in this category [4-7].

Safety and health at work of health personnel occupationally exposed to COVID-19 in Cuba

The Ministry of Public Health in the presence of COVID-19 has implemented an action protocol, with a national scope, for its prevention, control, therapeutic conduct for confirmed cases, contacts, suspects, active investigation of symptomatic fever and respiratory illnesses, among others, surveillance at the primary care level and follow-up of discharges of confirmed cases [8]. The singular observation of the protocol is that it contemplates the protection of the health of all occupationally exposed workers, in coherence with current national and international biosafety regulations and standards (7,8) and actions for the protection of the health of workers in the health sector and the recommendations and guidelines of the

Pan American and World Organizations (PAHO/WHO) and scientific societies [9,10].

The protocol provides for OSH training for all personnel working at the three levels of health care to deal with the pandemic, and instructs on the use, care, and maintenance of personal protective equipment.

Health personnel work in very high-risk and high-risk areas, known as red line areas (contact and suspect isolation centers, confirmed case wards, intensive care units [ICU], laboratories, morgues, and medical transport). Once the service is completed, they are kept isolated in sanitary facilities or others authorized for quarantine, for the time established in the current protocol, in which they must undergo medical controls with the aim of early detection of manifestations of contagion and thus prevent the broadcast.

Proposal for a preventive medical examination for the medical controls of health personnel during the quarantine period after occupational exposure to SARS-CoV-2

For the evaluation of the health status of the worker occupationally exposed to the COVID-19 pandemic, a format proposal was prepared for the preventive medical examination, which takes into account the early somatic and functional, psychic, psychophysical and psychosocial manifestations that, according to clinical and epidemiological evidence, are usually an expression of the action of the SARS-CoV-2 virus or of the environmental conditions related to work performance [10]. In addition, it allows guidance on the worker's aptitude to continue developing this activity in both conditions require it; rehabilitation if necessary; the identification of environmental risks for their control, mitigation or elimination; and constitutes a source of information for scientific research. The preventive medical examination is particularly important considering that a high percentage of infected people are asymptomatic, from which health and support personnel who enter quarantine after having worked in areas of epidemiological risk of contracting COVID are not excluded. -19.

The proposed format offers a methodology that facilitates a uniform assessment of the health status of personnel who have been occupationally exposed to risk during the medical care of confirmed or suspected cases of COVID-19, which is important from a clinical point of view. - epidemiological. In addition, it could contribute to the development of technologies and protocols based on evidence of occupational exposure and the effectiveness of preventive measures for the safety and health of workers potentially exposed to the SARS-CoV-2 virus during the care of infected people, suspects or contacts in hospitalization rooms, isolation rooms, laboratories, morgues, obituary services and medical transport.

The preventive medical examination would be carried out on all personnel leaving the very high-risk and high-risk areas.

Occupationally exposed workers are considered:

- Health personnel in the ICU and isolation rooms for people who are sick or suspected of COVID-19: doctors, nurses, diagnostic media technologists (laboratory, imaging, pathological anatomy, etc.) and therapeutics.
- Technical services: repair and maintenance personnel for technology for medical and non-medical use.
- General services: cleaning and cleaning operators, maintenance, food processing, sanitary transport.
- Operators of means of transport in function of transferring people who are sick or suspected of COVID-19.
- Operators for the collection, sanitation and disposal of liquid residuals, solid medical and general waste from health care areas for people who are sick or suspected of COVID-19.
- Operators of obituary services.

Regarding the post-COVID-19 preventive medical examination format, some of its characteristics will be discussed below.

Conclusion

Timely diagnosis and intervention are of significant strategic importance for a country with a notably aging population and which must count on the workforce of many people of working age who have become ill with COVID-19 for its socioeconomic development. Rehabilitation for the prevention of disability will promote the best quality of personal and family life, social and labor reintegration and the reduction of public spending due to demands for health services and facilities, and for disability pensions.

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Conflicts of interest

The authors declare not to have any interest conflicts.

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