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EDITORIAL

COVID-19. A challenge for healthcare professionals

COVID-19. Un reto para los profesionales de la salud

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Until the last century, coronaviruses have been primarily associated with non-severe respiratory infections in humans. Since then, three new coronaviruses have emerged and have spread across several countries. At the beginning of the century, the severe acute respiratory syndrome (SARS) caused by the SARS coronavirus was diagnosed in China and spread to 29 countries, reporting 8 096 confirmed cases and 774 deaths.⁽¹⁾ In September 2012, the first case of Middle East Respiratory Syndrome (MERS) associated with coronavirus was reported and until July 2019, 2 458 confirmed cases and 848 deaths were reported in 27 countries, according

to data from the World Health Organization.⁽²⁾ In December 2019, a new coronavirus was isolated in patients related to a fish market in the city of Wuhan (China).⁽³⁾ This coronavirus, named SARS-CoV-2, caused an epidemic in that city that has spread rapidly to the world, possibly the largest pandemic since the Spanish Flu that occurred at the beginning of the last century. At the end of March 2020, COVID-19 has already been confirmed in more than half a million people worldwide and the death of more than 26 000 patients has occurred. In Cuba, on March 28, 2020, the epidemic phase was declared after demonstrating local transmission. Until April 3,



233 cases and the death of 6 patients have been confirmed (mortality 2,6 %), these data are continuously updated as the epidemic evolves.

These diseases caused by a beta coronavirus (SARS, MERS, SARS CoV-2) share selected characteristics: 1) being caused by viruses not previously associated with human diseases; 2) producing severe clinical disease characterized by high fever, lung involvement, and higher mortality than influenza viruses; 3) For SARS and MERS the animal source was identified, in the first the civet (*Paguma larvata*) and the second by camels, while for SARS CoV-2, the determination of the animal source is still pending; 4) patients with comorbidities have a higher risk of complications and death; and 5) healthcare workers are at risk for acquiring infections during provision of care.

Furthermore, these diseases have had a negative economic impact with special magnitude for SARS and COVID-19. The global economic impact of SARS was estimated at around 30-100 trillion dollars, especially due to its effect on tourism and associated industries.⁽⁴⁾ The current pandemic will produce even greater economic losses; therefore, a depression of the world economy is being predicted.

The SARS epidemic was controlled with actions that included active case investigation, isolation, contact monitoring and quarantine, public distancing, and community quarantine. MERS control actions have focused more on early case detection and follow-up of contacts, with limited community quarantine or social isolation actions.⁽⁵⁾

COVID-19 has significant challenges for health

professionals in Cuba, mainly concerning the health care of the population and the prevention and control of infections in the community and healthcare facilities. The complexity of the care of patients with infectious diseases, that generate a significant proportion of cases that require critical care and assisted ventilation, guide the need to strengthen professional training for those who participate in urgent or emergency care at different levels of the healthcare system. On the other hand, the prevention and control of infections at the community level is a dynamic exercise, depending on the evolution of the epidemic, which must be objectively evaluated. Currently, the measures implemented to control the epidemic at the national level, similar to those used to control SARS and COVID-19 in China, are being objectively assessed to identify its impact on the prevention and control of this disease.

COVID-19 infection is a major challenge for infection control programs in healthcare facilities. Strong knowledge and skills are required on the prevention of infection transmission during healthcare and the availability of personal protective equipment, always limited by our financial possibilities. However, the greatest challenge today is the training of healthcare workers in these issues and the achievement in the prevention of the transmission of infections in healthcare facilities. Many questions must be answered in the search for the best scientific evidence that supports the prevention and control practices of COVID-19 and the clinical management of patients, as well as the duty to communicate, through papers



published in medical journals, the results of research designed and applied in the national context with positive results.

The identification of the source or reservoir of the disease is included, which will allow improving the disease control practices. The best definition of the transmissibility and incubation periods, the transmission potentials in the pre-symptomatic period and after the clinical recovery of the patients will be valuable in defining prevention practices. Likewise, the survival of SARS CoV-2 in fluids, tissues and human organs and the environmental survival of the virus will guide the actions for secondary prevention and the actions of environmental control.

The patient management strategy and the possibility of reducing extensive lung tissue damage, a determining factor of adverse outcomes in most cases, is an area for research. Clinical trials of drugs with antiviral effects or other novel therapies are included. Vaccine research is a developing area with ongoing trials in several countries.

The design and implementation of effective

population education strategies, which have proven valuable in the prevention of infections, must be developed and evaluated. Similarly, training strategies should be developed for the prevention of nosocomial transmission in healthcare workers.⁽⁶⁾

The COVID19 epidemic constitutes a challenge for Cuban healthcare professionals, which must be faced with an improvement in knowledge about the disease, its clinical management, and prevention and control strategies at the community level and in healthcare institutions. The humanism and professionalism of Cuban medicine and its valuable human capital will be strengthened as a result of the current epidemic and our decision to protect our population. The communication strategy of the Ministry of Public Health contributes decisively to this purpose, which includes frequent updating of the international and national situation of the epidemic and recommendations to the population for the prevention and control of the epidemic.

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Conflict of interest

The author declare that there is no conflict of interest.

