

**EDITORIAL** 

## FACING CORONAVIRUS – THE TRIAD OF REVERSE PROTECTION: BY PROTECTING MYSELF, I PROTECT THE OTHER BY PROTECTING THE OTHER, I PROTECT MYSELF

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In the last months, the world has been surprised by the countless information on the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-Cov-2), a disease that so much alarms the population. Fear, death, deficient structures for detecting and treating it, changes in daily life, insufficient personal protection equipment, and lack of beds and ventilators are synonyms of this pandemic of modern times.

Flattening the curve, a term understood strictly by epidemiologists then, became colloquial in these times marked by global communication and technology that bow before the traditional and sometimes basic and forgotten measures for the containment of communicable diseases. A novel virus, but with an old and traditional impact on humanity, causing uncertainties, debates, and the search for new actions and resumption of those once forgotten.

A novel virus that pushes us to resume the old and comprehensible cycle of transmission of diseases to subsidize and guide, once again, what we should do. A novel virus that makes us come back to the old hygiene



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principles. Sanitization of hands: so much proclaimed as necessary in health care; as well as so neglected in the daily life of communities and services. Who would have imagined that we would see billboards throughout the city advertising: Wash your hands! And now, the famous "hand sanitizer" has become the protagonist in the actions to prevent COVID-19.

Wearing a mask, a practice that is now not restricted to hospitals and surgery centers but is used on the streets and in homes, markets, and communities, be it a cloth mask or high filtration one. Discussing the capacity of one or another model or material went beyond the technical scope, and is now a topic in friends' and neighbors' chats. It is suffocating, but we need to wear it, people say, even if they are reluctant!

And the unusual, unexpected, and necessary social isolation surprised us in a special way. Our Brazilian people, so fond of physical contact and touch, needed to bow to distancing. No hugging, no kissing, no hand shakings; how different and sometimes difficult for our culture. No to visits, no to meetings, no to bars and beaches. Yes to family conviviality, yes to chats around the table and board games. New discoveries.

In the health care context, we have the opportunity to reflect and internalize, indeed, that by caring for myself, I care for the other, and by caring for the other, I care for myself. This premise is based on the cycle of disease transmission, including COVID-19 and, to the letter, the transmission of SARS-Cov-2.

In the lay knowledge context, it is important to understand how the disease is acquired and what to do to avoid it and to protect the family. And so, the media help different groups with different knowledge. We have two triads: the first relating to the transmission of the virus (Source of infection, Transmission mechanism, and Susceptible host) and the second relating to preventing the transmission of the virus (Social isolation/distancing, Wearing a mask and, Hand sanitization).

As for the first triad, concerning the transmission of the virus, for the moment we do not know which individuals are infection sources, since up to 80% of the carriers may not manifest serious symptoms. Nor do we know who the non-susceptible hosts are, knowledge being limited to those who, knowingly, have isolated the virus by means of serological or molecular tests; or confirmation of the disease by epidemiological criterion. The majority of the population is composed of hosts susceptible to SARS-CoV-2, and also of potential carriers of the virus. Applying universal preventive measures according to the principles of standard precautions is therefore justified.

The second triad is applicable when seeking the prevention of virus transmission. Social isolation spatially limits its spread, as well as social distancing. Considering that the virus has a limited spatial range, which is estimated at approximately one to two meters, depending on the force of expulsion from the source and on the environmental conditions, this measure is supported as relevant both for dissemination and as a protective measure. Social isolation contributes to the formation of clusters of people usually from the same family, and who keep isolated from the community; whereas social distancing allows physical distancing among people who share the same physical space.

The use of a mask limits the spread of the virus from the source, or carrier, to the environment, also seeking to block the inhalation of these agents by the susceptible host. Facial masks protect the nose and mouth from droplets and sprays; high-filtration respirators, such as the N95 mask, filter the air inhaled, and offer respiratory protection, but they do not bar the totality of the viruses. Still, wearing a mask significantly reduces the spread and received viral load, helping the organic defenses in combating the invader. When the individuals use masks, there are fewer disperse viruses in the environment, making it safer.

Last but not least, hand sanitization, a structure historically recognized as the main mechanism for the dissemination of microorganisms in the community and in health services. And their sanitization, with water and soap or alcohol solution (in gel or liquid), is proclaimed as the main and most scientifically proven measure in the prevention of person-to-person and person-environment-person cross-transmission of germs. Faced

with COVID-19, this measure is relevant and easy to follow and depends on cultural issues. For part of the population, washing their hands is part of their life routine; for others, it is a non-relevant and sporadic action.

In health environments, there are numerous studies showing gaps in the application of this elementary practice in daily care. Perhaps the pandemic will raise the awareness of health workers and of lay people to treasure hand hygiene. For, without a doubt, this action is a two-way street, it protects not only the worker but also the patient, as well as it is a cornerstone for the COVID-19 preventive measures. It is a low cost and high efficient measure. Thus, clean hands are hands that care for and protect, at home and in the hospital, and in the markets; and they are tools for maintaining human health.

By protecting myself, I protect the other; by protecting the other, I protect myself. In times of COVID-19, protection and care can be summarized by the triads presented here and which support the prevention actions of infectious diseases, yesterday, today, and tomorrow.

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