

EDITORIAL

Personal protection against COVID-19 in the emergency department: neither heroes nor cowards*Protección del personal de urgencias y emergencias frente al COVID-19*Guillermo Burillo-Putze¹, Salvador Espinosa Ramírez^{2,3}, María Lecuona Fernández⁴

On May 29, 2020, the National Epidemiological Surveillance Network (RENAVE) counted 40,961 health workers in Spain infected by COVID-19, a quarter of the Spanish population affected by the pandemic (24.1%)^{1,2}. Hospitalization was required for 10.5% of our colleagues (4,188), 310 cases (1.1%) were admitted to intensive care units and 211 of these required mechanical ventilation. However, data on severity (understood as hospital admission or level of intensive treatment) are only available for 31.7% of the cases registered at RENAVE. The hardest data in this report is, logically, our 52 companions who died, 61 if we use another official source, which also brings the number of affected healthcare workers to 51,482³.

The paper by Chico-Sanchez et al. published in this issue of EMERGENCIAS highlights aspects known, but not quantified to date, in a hospital emergency department (ED). Firstly, the routine use of protective measures through a program of respiratory hygiene among staff, improves the results of incidence of infection in case of virus epidemics. Second, anticipating an increase in the level of protection in the event of a health alert, within a strategy agreed upon at the hospital level, decreases the rate of contagion of healthcare workers in their work⁴.

There are several factors to be pointed out regarding the protection of health workers in the COVID-19 pandemic, which are already being discussed by Chico-Sánchez et al⁴. As shown in Figure 1 of their article, the different official definitions of "case", which varied from the initial presence of fever, respiratory clinic and having been in the region of Wuhan, through the inclusion of contact with inhabitants of Lombardy, the progressive inclusion of new symptoms such as digestive clinic or stroke among others⁵, could cause that, initially, health workers did not use all the protective measures against cases that in the course of the epidemic were later objectified as SARS-CoV-2.

This measure, in addition to following national recommendations, was intended to alleviate the shortage of personal protective equipment that either occasionally or more extensively and dramatically occurred in di-

fferent care settings. It should be noted that the health system was not prepared on this occasion to take on the enormous number of patients and suspicions it faced. Neither the experts in epidemiology nor public health were able to see sufficiently in advance the scope of the pandemic that was coming, nor did Spanish healthcare professionals believe that what was happening in China could happen in Spain or Europe. Previous experiences in Spain of preparing for other pandemics (SARS, MERS, Ebola), did not help either in considering an increase in the stockpile of personal protective equipment (PPE) in a preventive manner, as in the fable of Peter and the wolf.

In addition to the responsible use of PPEs, as the authors euphemistically call it⁴, there is another element that may have influenced the spread of infection among health professionals: the lack of training in the placement and above all in the removal of the barrier elements, mainly at the hospital level. A recent study also indicates how protection in certain areas of the body is not completely efficient. An appropriate use of PPE should be achieved, awareness of the risk of infection should be increased, weak points in protection should be highlighted and finally procedures should be optimized to minimize the risk of infection. This can be achieved through training by simulation, using videos, e-learning, skills training, peer-to-peer feedback during training and on the job, and the use of checklists⁶. However, it is obviously not at all the responsibility of the health care providers^{7,8} and it does not seem that in global terms it has influenced our rate of contagion in the work environment⁴.

Social networks and messaging groups, in our opinion, have helped to learn more about this pandemic, to bring forward forms of clinical presentation and treatments, at a faster rate than the classic channels of scientific information and sometimes the health authorities, especially with the different incidence and care pressure between autonomous communities. Although not exempt from the presence of hoaxes and more than questionable pseudo-scientific ideas, we have witnessed advice, working procedures and fluid and imme-

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diate distribution of clinical protocols, of enormous value, at all levels of care.

Emergency personnel deserve a special mention, whose exposure in extremely hostile and unfamiliar environments (private homes, public streets, patients without prior identification of the level of infection, etc.) has meant not only enormous emotional stress, but also great physical wear, due to the number of hours spent with an EPI on (ambulance transfers, first interventions with CPR⁹, etc.). Their work, seen from the most comfortable but not easy hospital environment, is unimaginable^{10,11}.

Moreover, this crisis has served as a reminder that healthcare workers can be exposed to a variety of pathogens during their care activities, making the “standard precautions” recommended by the CDC for more than three decades to reduce the spread of infections to healthcare workers and patients, regardless of their diagnosis, more important than ever. We don't know for sure if there will be a resurgence of COVID-19, but we do know that the flu will be back in a few months. Hand washing, facemask use and vaccination are key elements in reducing infections and should be strongly promoted among health care providers and the general population¹²⁻¹⁴.

The high dependence on the Asian market for medical equipment makes it essential for Spain to be self-sufficient in consumables, and that it should promote its own quality electromedical equipment industry. The cases of defective masks and the difficulty in acquiring medical equipment (e.g. respirators) have been an example of a strategic industrial sector to be developed in Spain in the near future.

Now that there has been enormous concern about the capacity of the health system to absorb the demand for care resulting from COVID-19¹⁵, it is worth reminding our politicians, our health managers and also our colleagues in other specialties, that the emergency care system and the EDs are saturated every winter or with every heat wave, which affects many patients and leads to harsh working conditions for professionals: let us learn the lesson that COVID-19¹⁶ has unfortunately provided us with.

Without disregarding the rest of the healthcare system, emergency services and EDs have been a key player in this pandemic. We are not heroes: we do our job, with risks that we assume but that must be minimized, until we achieve zero infections, zero admissions and zero deaths.

One last note: once the Princess of Asturias Award for Concord 2020 is known to the Spanish health professionals who work in the front line against COVID-19, we claim our real prize, the one that by right, by professional necessity and by recognition of the population we deserve: the specialty in emergencies and medical emergencies for doctors and nurses¹⁷. For those colleagues who will no longer be able to see it.

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References

- Equipo COVID-19. RENAVE. CNE. CNM (ISCIII). Análisis de los casos de COVID-19 en personal sanitario notificados a la RENAVE hasta el 10 de mayo en España. Informe a 29 de mayo de 2020. (Consultado 2 Junio 2020). Disponible en URL: [https://www.isciii.es/QueHacemos/Servicios/VigilanciaSaludPublicaRENAVE/EnfermedadesTransmisibles/Documents/INFORMES/Informes%20COVID-19/Informe%20n%C2%BA%2033.%20An%C3%A1lisis%20de%20los%20casos%20de%20COVID-19%20hasta%20el%2010%20de%20mayo%20en%20Espa%20a%20a%2029%20de%20mayo%20de%202020.pdf](https://www.isciii.es/QueHacemos/Servicios/VigilanciaSaludPublicaRENAVE/EnfermedadesTransmisibles/Documents/INFORMES/Informes%20COVID-19%20hasta%20el%2010%20de%20mayo%20en%20Espa%20a%20a%2029%20de%20mayo%20de%202020.pdf).
- Equipo COVID-19. RENAVE. CNE. CNM (ISCIII). Informe nº 33. Análisis de los casos de COVID-19 notificados a la RENAVE hasta el 10 de mayo en España a 29 de mayo de 2020. (Consultado 2 Junio 2020). Disponible en URL: <https://www.isciii.es/QueHacemos/Servicios/VigilanciaSaludPublicaRENAVE/EnfermedadesTransmisibles/Documents/INFORMES/Informes%20COVID-19/Informe%20n%C2%BA%2033.%20An%C3%A1lisis%20de%20los%20casos%20de%20COVID-19%20hasta%20el%2010%20de%20mayo%20en%20Espa%20a%20a%2029%20de%20mayo%20de%202020.pdf>.
- Hay 51.482 sanitarios con coronavirus en España y 4.730 siguen ingresados en hospitales. (Consultado 29 Mayo 2020). Disponible en URL: https://www.antena3.com/noticias/sociedad/los-sanitarios-con-coronavirus-ascienden-a_202005295ed136a5f00f930001fb4789.html.
- Chico-Sánchez P, Gras-Valentí P, Mora-Muriel JG, Algado-Sellés N, Sánchez-Payá J, Llorens P. Impacto de la pandemia de COVID-19 en los trabajadores sanitarios del servicio de urgencias de un hospital terciario. *Emergencias*. 2020;32:227-32.
- Feldman O, Meir M, Shavit D, Idelman R, Shavit I. Exposure to a Surrogate Measure of Contamination From Simulated Patients by Emergency Department Personnel Wearing Personal Protective Equipment. *JAMA*. 2020;323:2091-3.
- Dieckmann P, Torgeirsen K, Qvindelands SA, Thomas L, Bushell V, Langli Ersdal H. The use of simulation to prepare and improve responses to infectious disease outbreaks like COVID-19: practical tips and resources from Norway, Denmark, and the UK. *Adv Simul (Lond)*. 2020;5:3.
- Zhan M, Qin Y, Xue X, Zhu S. Death from Covid-19 of 23 Health Care Workers in China. *N Engl J Med*. 2020;382:2267-8.
- Ing EB, Xu QA, Salimi A, Torun N. Physician deaths from coronavirus (COVID-19) disease. *Occup Med (Lond)*. 2020; kqaa088.
- Lemoine S, Briche F, Jost D, Prunet B. Protecting the Reshospital Professional First Aid Teams from Airborne Viral Particles in the Case of Out-of-Hospital Pediatric Cardiac Arrest during the COVID-19 Pandemic. *Prehosp Disaster Med*. 2020 (en prensa).
- Maudet L, Sarasin F, Dami F, Carron PN, Pasquier M. Urgences préhospitalières : crise COVID-19 [Emergency Medical Services: COVID-19 crisis]. *Rev Med Suisse*. 2020;16(Nº 691-2):810-4.
- Tien H, Sawadsky B, Lewell M, Peddle M, Durham W. Critical care transport in the time of COVID-19. *CJEM*. 2020 (en prensa). doi:10.1017/cem.2020.400
- Trilla A. Transmisión de la gripe en los servicios de urgencias. *Emergencias*. 2018;30:5-6.
- Esteve-Esteve M, Bautista-Rentero D, Zanón-Viguer V. Riesgo de transmisión de gripe en un servicio de urgencias hospitalario en período de máxima incidencia epidémica. *Emergencias*. 2018;30:7-13.
- De Miguel Beriain I, Lazcoz Moratins G, Conal Fuertes I. La adopción de medidas preventivas contra el contagio de gripe en las instalaciones de las administraciones sanitarias debería ser una obligación jurídica exigible. *Emergencias*. 2018;30:209.
- Coronado-Vázquez V, Gómez-Salgado J. El error de no planificar las emergencias en salud pública. *Gac Sanit*. 2020 (en prensa).
- Juan Pastor A. Un sistema sanitario contra un virus. *Emergencias*. 2020;32:152-4.
- Vázquez Lima MJ, González Armengol JJ. Seguimos sin especialidad y sin interlocutor. *Emergencias*. 2019;31:370.