

# COVID-19 Pandemic in Spain: Demography, Medicine and Psychology



**Pedro Reques Velasco<sup>1</sup>, Carlos Fernandez-Viadero<sup>2,3</sup> and Damaso Crespo Santiago<sup>3</sup>**

<sup>1</sup>Faculty of Philosophy (Geography), University of Cantabria, Spain

<sup>2</sup>Psychiatry Service, University Hospital M Valdecilla and Instituto de Investigación Sanitaria Valdecilla (IDIVAL), Spain

<sup>3</sup>Faculty of Medicine, University of Cantabria, Spain

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**\*Corresponding author:** Damaso Crespo Santiago. Biomedage group. Facultad de Medicina. Universidad de Cantabria. Ave. Cardenal Herrera Oria 2, 39011-Santander. Spain

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## Opinion

Since the outbreak of SARS-CoV-2 pandemic, COVID-19, Spain is one of the countries that has suffered and is suffering the most because of the devastating effects of this disease. Currently, the WHO has estimated that there are some 50-million cases and 1,250-K deaths worldwide from the disease, both confirmed by serologic COVID-19 tests [1]. In Spain there is a great variety of figures presented by organizations that offer statistics: Whether they are governmental, regional, local or other organizations. The Health Secretary confirmed that currently there are almost 1.6 million people affected and more than 43 thousand deaths from COVID-19. We believe there are three pillars that explain the detrimental COVID-19 effects upon the Spanish population: The demographic and territorial structure and medical and psychological issues. These three pillars have had a great impact, mainly, on elders. Therefore, we are able to understand the reasons Spain is suffering so seriously and we will put forward several ideas to reduce the spreading and to prevent further viral attacks to avoid a third-wave. Because unfortunately, we are currently going through a second viral wave.

Life expectancy and longevity in Spain is one of the highest in the developed world, according to WHO's statistics the average life expectancy is of 83.08 years. Therefore 19% of the Spanish population is 65 years of age or older. Bearing in mind that COVID-19 has affected the older generations worldwide, a lot more than young or middle-aged people, we have one of the pillars of the disease established. A recent publication stated that Spain's annual life expectancy has been reduced by 0.9 years, for

both men and women, during the period 2019-2020 [2]. But there are countries where longevity values are similar and they do not suffer the COVID-19 harmful effects like we do [3]. Therefore, we have concluded that there are differences in COVID-19 mortality rates with regards to gender, population density and mobility, and socio-territorial reasons, to name a few. Women living in low-rent suburbs of highly populated cities are more prone to suffer and pass away from COVID-19 than other people. 86.1% of the registered deaths are for people aged 70 or over. Moreover, those figures increase if we introduce older adults that were living in nursing homes (insufficient updated data is available for an accurate figure).

This demographic data has to be used in order to establish programs for early detection of disease outbreak [4]. Furthermore, the relatively unique territorial organization of Spain means that there are eighteen health care systems: seventeen regional and a national one [5]. Consequently, there are considerable differences in the methods employed to tackle the pandemic. Apart from the few months at the beginning, when the Spanish government adopted a state of alarm to have the power to decide every measure at a national level, the current situation is regional government control and power to decide how to face the situation. This means eighteen health care programs that offer different COVID-19 related death rates, new cases and recovery estimates. The second leg of our tripod is represented by the medical response to the pandemic. No country has been suitably prepared to fight against this new disease that, as far as we know, originated in Wuhan China, as a new type of viral

infection affecting mainly the respiratory system. This new SARS-CoV-2 spread quickly all over the world. Because of international mobility Spain was one of the first countries seriously affected and despite knowing that it was undoubtedly going to spread, no public health measures were reinforced until several months later. The obligatory use of face masks, hand sanitizing gel and social distancing, were introduced when the pandemic was gaining momentum. Previously the health care services were working under extreme pressure, hospitals were congested and until the introduction of anti-inflammatory therapy, the amount of people that were dying was steadily increasing [6]. The number of patients that entered ICUs was greater than the number of beds available [7-10]. And more importantly, the limit of people who could receive further treatment depended on the limited number of mechanical ventilators.

The third leg of our proposed tripod is represented by the psychological point of view. In Spain, socializing is a very important part of our culture, we gather in close proximity with family, friends and acquaintances, shaking hands, hugging and cheek-kissing on a daily basis. These actions increase the risk of contracting diseases. It is well known that SARS-CoV-2 most prevalent means of spreading is mainly through airborne microscopic aerosol drops. Moreover, fomites are another risk to spread the virus although its capacity to infect has been proven to be almost non relevant. The post outbreak implantation of a three-months period of national confinement with a series of industrial and social restrictions that hit the economy seriously also resulted in social isolation, mainly for older adults and had its harmful effects, such as emotional and general daily distress and fear [11-14]. Then the national government decided to reduce or eliminate certain restrictions employing a series of phases that were different in every region and inevitably caused friction amongst regions and respective leaders. All linked to economic recovery. In hindsight, perhaps the national government should have carried on in total control of restrictions because this so called "slow return to normality" is perhaps the basis of the second wave that we are suffering today. It is a fact that because the number of SARS-CoV-2 tests increased, the amount of people that have been diagnosed with COVID-19 is very high and every day the figures increase nationwide. Most of the people that have been in close contact with those affected are confined at home, under medical surveillance, for a period of 10 to 14 days. Fever-reducing drugs, painkillers and NSAID are prescribed and if the symptoms worsen, they are transferred to hospitals, where a series of drugs are prescribed in order to alleviate symptoms; hydroxychloroquine, broad-spectrum antivirals, dexamethasone are among the most employed, and immune based therapies (immunoglobulin transfer or antibody treatments) were employed but the results have not been very satisfactory. In the most advanced cases they are transferred to an ICU where mechanical ventilation is employed in order to ensure oxygen requirements. Due to the shortage of ventilators one of the main parameters employed for triage was patient age. We

consider that this age-factor has to be reconsidered as many older adults prior to entering hospital lead a very healthy life and are able to perform their daily tasks with ease. In all probability, the death rate amongst this group of people could have been reduced, as the Spanish Society for Geriatrics and Gerontology published [15].

During the first wave of the pandemic, the most affected people were elders while younger people were low risk. Now, in the second wave of the pandemic the average age of affected people has gone down. It was not the end of the pandemic and eliminating or reducing restrictions provoked this second wave. It forced health authorities to reintroduce new social restraints and restrictions, mainly in the services sector in order to avoid virus transmission. Fortunately, the second wave has gone hand in hand with more responsible social awareness that is undoubtedly responsible for the reduction of the spreading as we face the winter months. Despite this, everyday there is an alarmingly high daily death toll [16-17]. After a series of disappointing results, there is light at the end of the tunnel. Promising vaccines are on the way and will be available [18]. The Health Authorities have decided that nursing home residents and staff will be the first group of people to be vaccinated followed by hospital and health care personnel as well as people at high risk. But until then the only real weapons we have at our disposal to fight SARS-CoV-2, apart from the ones previously mentioned, are mainly population preventive-based strategies such as; virus airborne transmission avoidance and frequent hand and surface washing with proper disinfectants and the knowledge that in spite of the existence of a vaccine, the battle is far from over.

In summary, government authorities were not aware of the coming pandemic and were not suitably prepared. A lesson learnt. Health(s) system(s) were not prepared to deal with the new virus and the impact of the outbreak was so aggressive that there was a shortage of mechanical ventilator devices and face masks. The return to the so called new-normality at the end of Spring was also a factor in the outbreak of this current second-wave. The coming yearly flu epidemic has prompted a national vaccination campaign against influenza virus. As stated at the beginning of this article, demography, medicine and psychology are three factors that have to be taken into consideration when discussing the causes, consequences and future actions to face future health conflicts in a country with an aging population. However, old age should not be the most important triage factor for not providing proper health care.

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