

COVID-19: the critical balance between appropriate governmental restrictions and expected economic, psychological and social consequences in Italy. Are we going in the right direction?

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Summary. Since the declaration of COVID-19 pandemic infection by the World Health Organization, many governmental restrictions have been differently applied in the involved countries in order to contain the spread of the infection; Italy applied severe restrictive, public measures actually confining the entire population to an almost complete lockdown for several weeks; the restrictive quarantine can be considered controversial when excessively prolonged over time, due to many possible economic, psychologic and social consequences with a remarkable impact on the population. In this article we analyze possible collateral damages related to the prolonged quarantine.

Key words: COVID-19, quarantine, mortality rate, public health

On March 2nd 2020 the Italian Government issued a new decree concerning COVID-19 emergency, which established additional restrictions to the population, actually imposing an almost complete lockdown of the nation (1). Data about the real and accurate prevalence of infection and disease related to COVID-19 are often unavailable, and always controversial. In a paper by Baud et al. according to WHO data on the cumulative overall number of deaths to March 1, 2020, case-fatality rates would be 5.6% (95% CI 5.4–5.8) for China and 1.5% (CI 1.2–1.7) outside of China (2). In a brilliant paper by Onder G et al. (3), case-fatality rate in Italy is estimated 7.2% by March 17th 2020, and the authors' interpretation is that such an unusually high rate, compared to other countries, could be related to three factors: (a) the higher mean age distribution of the Italian population, (b) the frequent presence of comorbidities in the Italian elderly and (c) the uneven criteria used by the different regional authorities to select candidates for

the SARS-CoV-2 RT-PCR tests. According to official data (origin: Italian National Institute of Health, March 26th 2020) the case-fatality rate related to the virus would have reached 9.2% in Italy, with 73,780 infected individuals and 6,801 deaths (4). According to an Oxford Centre for Evidence-Based Medicine estimate, based on *www.worldometers.info* data, the COVID-19 fatality rate in Italy would have rocketed to 10.09% (5).

Considering the variability of data, it would have been more congruous to make comparisons and evaluations using mortality rates rather than case-fatality rates (6,7), because the information on COVID-19 epidemic in Italy has always been so deeply affected by the selection biases, concerning the subjects who were submitted to diagnostic swabs to identify COVID-19 infection, that speaking in terms of case-fatality rates is fully misleading because of the unreliability of the denominators. This because many patients who died at home were not submitted to any test for the disease;

sampling on the population and on healthcare professionals, if any, were incomplete etc.

But, alas, there are problems also with mortality rates! In an important alert published on 17th April 2020 on its website, the Italian National Institute of Statistic (ISTAT) declared that it will be impossible, by the end of the first four months of 2020, even to compare the January-April 2020 overall mortality of the Italian population with the one of 2019 or 2017-2019, because of a remarkable delay of 2020 data coming from many areas of the nation (8).

On the 23rd of march the President of Confindustria (Italian Industrial Entrepreneurs Association), Dr. Vincenzo Boccia, declared that the government restrictions will cause a loss of 100 billions Euros per month to the overall Italian economic activity and that "from business emergency we will get into a economic war context", stating that imposed restrictions, compelling 70% of economic activities to temporarily shutdown, will have a tremendous social and economic impact (9).

According to a study developed by the Engage-Minds Hub Research Group (Catholic University of Milan), at least one third of Italian population will suffer from a psychological state defined "alert state": those subjects who are particularly afraid and confused with COVID-19 emergency, will act in dysfunctional and inappropriate way in relation to the healthcare system (10). But nobody is in the position to make an accurate forecast about the escalation of the "alert state" of people and its psychological consequences.

In Italy we have already experienced riots in prisons and also escapes due to the perception of the pandemic emergency (11); perceptions made frightening by the information offered daily by the media, that list the raw numbers of cases and deaths, which can impress beyond any measure if not carefully explained and commented. That way used to inform the lay public only increases the social alert, which can therefore result in generalized fear and panic.

On the basis of the number of cases diagnosed, and of the advanced stage of the disease in some Italian patients it is reasonable to believe that the virus had been circulating within the Italian population since January 2020, long before the present government restrictions were enforced.

Some scientists are extremely worried about the escalation of psychological alert of the population, claiming that collateral damages from restrictions could induce more deaths than the virus itself: they define the restrictions imposed by the government as incongruous, because often controversial and not properly based on real evidences emerging from reliable studies, and accompanied by a kind of malice by the local authorities in prosecuting the offenders of the restrictions (12,13). Other scientists, such as the mathematician Prof. Isaac Ben Israel, are convinced that the statistical analysis of the data reveal that lockdown measures do not positively affect the curves of spreading of the contagion among the population (14). Some experts underline the lack of specific, robust data regarding efficacy of lockdown measures vs an appropriate use of social distancing and correct hygienic interventions, supporting the need of a more responsible approach to the situation (15). Many papers regarding the negative clinical, behavioural and psychological effects of the pandemic on the whole population has been published, underlying the possible worsening of other pathological conditions that already do affect the population: overweight, due to lack of physical exercise vs unmodified diet; increase in drugs, cigarettes and alcohol consumption, less sun exposure, increase of domestic violence, worsening of psychiatric diseases (6,16). Alerts from scientists have already appeared not only on scientific literature, but also on popular newspapers, suggesting to consider all of these potential risks, focusing on the need of correct public health interventions and, consequently, on revisiting the restrictive measures (17).

In order to mitigate the economic panic that is progressively affecting people, we should try to rethink preventive measures aiming to protect mainly those groups of subjects that are really at risk of developing severe COVID-19 clinical pictures and that actually are not, or not enough. An interesting proposal could consist in severe quarantine of well-known infected subjects and in classifying the population in 3 categories by age, confining for example, over 70 years and older people to strict, complete seclusion as long as necessary, people between 45 and 70 years old to intermediate protective measures (individual protective devices, social distancing, essential movements) and

people younger than 45 to freely participate in common daily life and to carry on economic activities and avoid economic default, considering the lower risk of the latter to develop a severe disease, and so contributing to increase herd immunity. Moreover, the population should be classified by co-morbidities that have been clearly shown as associated to severe COVID-19 clinical pictures, suggesting an ad hoc restrictions within the above mentioned third group.

An impressive increase in ICU beds have been rapidly achieved in all Italian regions in an extremely short period of time, and this achievement has significantly helped to cure the worst cases of the disease. But a wise National (and the Regional) Health Services should have prepared themselves in advance to face up to the principal kinds of emergencies, including epidemics and pandemics, as stated by the Italian legislation, from the original L 225/1992 (Istituzione del Servizio Nazionale di Protezione Civile) to the more recent Legislative Decree 1/2018 (Codice della Protezione Civile). On the contrary, according to a report prepared by the GIMBE research group (Evidence-Based Medicine, Italian Research Group) the public investments in the healthcare system were reduced by approximately 37 billion Euros in the last 10 years in Italy, cutting off many hospital beds and reducing the role and the weight of Public Health Departments (18).

Now, as a positive contribution to the program of “recovery”, we suggest that data on positivity, disease, and death be collected with more careful attention to their epidemiological use; that restrictions in phase 2 be redesigned, providing the maximum protection for the most fragile sections of the population, but allowing subjects at lesser risk of fatal consequences to be employed for a kind of “production renaissance”, and avoiding the psychological, economic and social damages of unnecessary restrictions. The risk exists that interventions not based on proved evidence could add more victims to the irrecoverable fatalities due to the COVID-19 pandemic.

Ethics Committee

Not applicable

Conflict of interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article

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