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Early COVID-19 pandemic response in Italy: Pros and cons

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Abstract

Since the beginning of the COVID-19 pandemic, Italy was one of the worst-affected European countries. The rapid surge of cases and the limited capacity of intensive care unit departments have posed a serious threat to the Italian national health system. In this paper we describe the first response and the main measures carried by Italian policy makers, as coordinated by a governmental committee of public health experts, which have succeeded in preventing the pandemic from turning into a disaster. Early closure of the school, quarantine measures and lockdown were put in place and the response of the population has been good overall.

Despite the Italian health care system of universal coverage is considered the second-best in the world, during phase 1, the Italian decentralisation and fragmentation of health services probably restricted timely interventions and effectiveness. In northern Italy, Lombardy, Emilia Romagna, Piedmont, and Veneto, which reported most of the Italian cases, carried out different strategies against COVID-19, with great differences in testing, quarantine, and public health procedures.

The improvement of the epidemiological situation has allowed an easing of the restrictive measures, with a progressive restarting of work activities. The government and technical-scientific bodies have prepared health strategies to support a possible second epidemic wave in the autumn.

Introduction

Since the beginning of the COVID-19 pandemic, Italy was one of the worst-affected European countries. As of May 6, 2020, 214,457 persons had a confirmed infection by the SARS-CoV-2 coronavirus. Overall, 15,769 persons required hospitalization and 1,333 intensive care unit admission, resulting in 29,684 confirmed deaths. More than one in ten infected people (n = 21,880) were healthcare workers. To date, 154 physicians and 37 nurses have died [1]. The rapid surge of cases and the limited capacity of intensive care unit departments have posed a serious threat to the Italian national health system [2].

This Italian health care system of universal coverage is considered the second-best in the world [3]. However, in Lombardy, which has been the hardest hit Italian region, in March 2020 hospitals were overwhelmed and close to the breaking point [4]. The timely response of policymakers, as coordinated by a governmental committee of public health experts, has succeeded in preventing the pandemic from turning into a disaster. We believe the Italian experience may be useful for identifying keys in dealing with COVID-19 challenges. Errors made early in Italy benefit other healthcare services. In this short report, we describe the main measures carried out in the Italian response to COVID-19.

The first response and the regulatory framework

On 30 January 2020, when the World Health Organization (WHO) declared the coronavirus epidemic in China a "public health emergency of international concern", two positive cases were reported among Chinese tourists in Rome. On the same day, a task force of experts was established by the Ministry of Health for the containment of epidemic outbreaks. On 31 January, the Government of Italy, imposed a ban on flights from China. The Italian Constitution declares that "The Republic shall safeguard health as a fundamental right of the individual and as a collective interest and shall ensure free medical care to the indigent. No-one may be obliged to undergo any health treatment except under the provisions of the law. The law may not under any circumstances violate the limits imposed by respect for the human person" (Art. 32) [5]. Therefore, some medical acts such as quarantine, contact tracing and others can be implemented only if the authorities have decreed a public health problem.

On February 3, the Civil Protection Department of the Italian Government released an emergency management plan. A third case of the disease was confirmed on 7 February, with the patient being an Italian man evacuated from Wuhan. On February 23, immediately after the first two main Italian clusters in Codogno and Vò Euganeo, respectively in the Lombardy and Veneto regions, eleven municipalities were identified and placed under quarantine by a Decree of the Council of Ministers. Despite this initial lockdown, in a few days the country was hit by an epidemic of unprecedented force, which has been defined by newspapers as Italy's biggest crisis since World War II. In a short time, schools of all levels were closed across the country (March 5) and lockdown and quarantine measures were expanded to the entire country (9 March). The government decree established by Prime Minister Giuseppe Conte essentially prohibited all movements of people within the whole territory and the closure of all non-essential business activities.

In Italy the strong political response was carried out by a certain number of Decrees of the President of the Council of Ministers, who explained the content of each Decree with public appearances on TV, supported by a daily press conference held by the Department of Civil Protection to share data and trends on the epidemic. On one hand, there were serious consequences on the economy with the biggest Gross Domestic Product drop since the end of the Second World War. On the other hand, the emergency produced a concentration of power, unprecedented in the history of the Republic of Italy, in the hands of the President of the Council of Ministers, who needed to handle the emergency in a country with over 300 thousand national laws and tens of thousands of regional and local laws. Although penalties for lockdown offenders were only administrative fines, with penal sanctions only for individuals infringing quarantine, the response of the population has been good overall. From April 25 to May 4, penalties were imposed on 2.4% of the 1,793,042 people who were checked (n = 43,406); furthermore, only 1,122 sanctions were issued (0.2%) (Ministry of the Interior) on 648,459 businesses inspected. These figures are quite low, in consideration of the high frequency of penalties on Italian roads [5].

The Italian healthcare strategy

It is important to remember that Italy has a national health service that guarantees equal treatment and free access to medical treatment for everyone. Health services, however, are provided by the 20 Italian regions, each through its own regional health system. In practice, this produces differences not only in the available resources, but also in the organizational rules. The Ministry of Health only has direction and coordination functions. Since the outset of the epidemic, the Italian government has advocated control of health care activities (to be realized by the Regions) and has established close connections with the Department of Civil Protection, part of the National Institute of Health (Istituto Superiore di Sanità, ISS), which constituted a "Scientific Technical Committee" for the epidemic, and the National Insurance Institute of Work Injury and Occupational Diseases (INAIL). The unions also collaborated, creating a shared protocol with the government.

During phase 1, the Italian decentralisation and fragmentation of health services seems to have restricted timely interventions and effectiveness [7]. The Ministry of Health, which only performs functions of coordination, has created a scientific committee through the Department of Civil Protection, the ISS, and the National Insurance Institute of Occupational Injury and Diseases (INAIL) to drive the government's decisions which ap-

ply to all regions. On 24 April, Government and Social Partners developed a protocol with measures for ensuring health and safety at work. Many scientific associations later produced their own documents on the subject [8]. Overall, the National Health System response to this emergency was effective. However, Italy's healthcare service needs stronger national coordination and more partnerships between the private and public sectors [7]. Healthcare decentralisation has received a lot of criticism. In Northern Italy, Lombardy, Emilia Romagna, Piedmont, and Veneto, which reported most of the Italian cases, carried out different strategies in the battle against COVID-19, with great differences in testing, quarantine, and public health procedures. Lombardy focused its efforts on increasing intensive care unit beds, whereas Veneto, Emilia Romagna, and Tuscany invested more resources in territorial and community care. Thus, epidemiologists from different regions were at odds and inconsistencies have been claimed between national, regional, and local laws. Lack of personal protective equipment and training as well as hospital unpreparedness were major concerns for healthcare workers and hospital management. INAIL recognizes COVID-19 infection as an occupational injury in healthcare staff, front-office workers, and all those in direct contact with the public [9, 10]. Preliminary data by INAIL show that 72.8% of the COVID 19 infections recognized as occupational injury concern health and social care workers employed at hospitals and nursing and residential homes [11], as the hospitalized, the elderly, and the disabled are particularly vulnerable to COVID-19 [12].

In Italy, data about infection, hospitalization, and deaths related to COVID-19 have been collected from each Regional Health Service and transmitted to the Ministry of Health and the Department of Civil Protection to adapt measures and strategies during the crisis. Information and technical measures for the public were provided by the ISS via a dedicated web page "ISS for COVID-19" (https://www.iss.it/coronavirus). As of 06 May, 19 technical reports had been published (https://www.iss.it/rapporti-covid-19) and all containment measures carried out by the Decree of the Council of Ministers DPCM 26 April, 2020, starting May 4th and up to May 17th for phase 2; these were shown and explained to the general public.

Phase "two": Containment measures and lessons for stakeholders

The improvement of the epidemiological situation has allowed an easing of the restrictive measures. On 4 May, Italy entered the second phase of its coronavirus lockdown, with a progressive restarting of work activities, even if schools and gatherings remained closed. At this time, it was permitted to do individual physical activity and meeting relatives. The Presidency of the Council of Ministers published on its website a series of "frequently asked questions" for doubts over interpretation [13]. These containment measures will be monitored closely depending on the epidemic trend and could be tailored to the particular needs of regions to contain possible local outbreaks in the near future. Italy was one of the most tested countries in the world, with 2,246,666 molecular tests ("swabs") carried out as of 5 May [14]. From April (n = 30,000) to May (n = 55,000) there was a progressive increase in the number of tests [15].

Italy was on the frontline of the crisis, but not all countries learned from Italy's lessons. Surely, Italian policymakers do not have to repeat the same errors and should prepare the healthcare response in the best possible way for a probable second wave in autumn. The containment strategy should be based on contact tracing, testing [16], and protecting the most vulnerable, as well as healthcare and all other workers [17–19]. Accurate information, clear communication to the public, and cultural steps to nurture individual responsibility are also needed.

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