Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Letter to the Editor

COVID-19 and healthcare systems: What should we do next?

The coronavirus disease 2019 (COVID-19) pandemic took the world by surprise and particularly caught off guard healthcare systems worldwide. We have witnessed the same events across the vast majority of affected countries, where COVID-19 spread caused, in a few weeks, excessive hospital overload and high shortage of healthcare resources and workload of professionals.[1]

Emerging literature has been highlighting this overload, but little or nothing has been written on how healthcare systems will come out after the emergency. There two main aspects that should be taken into account. The first is closely related to COVID-19 epidemic: after flattening the curve and slowing the spread of the virus, epidemiological models predict that Severe Acute Respiratory Syndrome - Coronavirus - 2 (SARS-CoV-2) will chronically affect the healthcare systems and the population will be needing health care at any given time. Virtually, other peaks are possible, with all the consequences that this entails. Second, the outbreak has produced indirect effects on healthcare organizations, due to hospital overcrowding, delayed care of chronic diseases and late interventions for time-dependent conditions (e.g., stroke, acute myocardial infarction, and so on).[1] Thus, there will be the need to redesign entire healthcare services during the next few weeks and months, particularly in terms of care setting, staffing requirements, and therefore in budgetary terms.

This is especially important in those countries where the COVID-19 epidemic has been catastrophic for both the health facilities and the local population. Italy is one of these countries, with more than 205,000 recorded cases and 27,000 deaths as of April 30.[2] Here, we have the advantage of a National Health Service, controlled by central government and organized at the national, regional, and local levels, which aims to universally cover population's health needs. Unfortunately, to date it is not available any structuring plan to be implemented in the days to come. But what should be done?

The dynamics of infection has showed that most secondary transmission of COVID-19 occurs in hospitals,[3] which have been striving to provide care to patients with COVID-19 and without COVID-19. This suggests the need of reducing unnecessary hospitalizations and re-admissions through the implementation of care coordination and transitional care interventions. First of all, the movement of patients with COVID-19 from one care setting to another should require the installation of mobile COVID-19 units including emergency supplies, such as Intensive Care Unit (ICU) and recovery beds for patients who cannot be discharged, and diagnostic instruments. For those patients who do not require hospitalization, community care services and professionals should be instructed to ensure accurate clinical support during this next step in the fighting against SARS-CoV-2, constructing stable COVID-19 teams across Agencies for Health Protection in the country. In particular, the role of general practitioners and other primary healthcare personnel must also be rethought to provide care to people at home or in other transitional care units, from the first onset of symptoms by strengthening home-visiting and home-based care programs, and enhancing the role of technologies, such as telemedicine and mobile health.

As mentioned, COVID-19 has caused difficulties in the care of other diseases as well, leading to a more complex and changing environment in which health services have to move. Transitional care models will therefore help reflect the tension that has arisen in the management of these conditions (for instance, chronic diseases).

Public health surveillance needs to be strengthened too. Among the first responses to the epidemic, we have seen the Italian government appealing to doctors and nurses to request availability to move to the areas most affected by COVID-19 (i.e., some provinces in Lombardy region) and emergency recruitment programmes for healthcare workers and postgraduate medical students in the whole country. These include public health professionals, who have, to different degrees, the delicate assignment of the disease surveillance and contact tracing.

Evidently, these interventions – as all the others that will be suggested – cannot be individually proposed and designed. We need a recovery national plan for the adoption of modern healthcare, starting with a recruitment strategy for doctors and nurses. Italy has a lower number of healthcare workers (per 1000 inhabitants) compared with other European countries, and the ratio of nurses to doctors and the number of nurses are below the average in Organization for Economic Co-operation and Development (OECD).[4]

In a nutshell, in parallel with social and economic planning to go back to normality, the country must meet the right conditions to reinforce our defence against COVID-19 outbreak and preserve the sustainability of Public Health and National Health Service.

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