What did COVID-19 do to the organization of Italian rheumatology? The examples of Luigi Sacco University Hospital and the Local Health district of ATS Sardegna: the two faces of the same coin

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Leading scientists and influential professional societies have been warning of the dangers of emerging infections and the threat of a global pandemic for years,[1,2] but nobody imagined that the new decade would open with the most significant global public health challenge of our lives. The emergence and subsequent spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has surpassed many of our expectations as the evolving global public health and economic crisis continues to change our personal and professional lives.

Although the disease started in China in December 2019, as of 27 March 2020 it had rapidly affected more than half a million people in 176 countries, and these numbers are bound to increase further. A significant proportion of adult patients require hospitalization and may develop life-threatening complications whereas children do not usually develop serious disease but they can transmit the virus. This suggests that age and host-specific environmental factors seem to affect the containment and clearance of the virus, as well as inflammation-related tissue and organ damage.[3]

It is significant that no pharmaceutical agent has yet been found to be safe and effective in preventing or treating coronavirus disease 2019 (COVID-19),[4] which leaves the medical and public health community with only non-pharmaceutical interventions (NPIs) in its attempts to reduce the burden of the disease.[5] The measures aimed at reducing both local and global disease transmission include bans on public gatherings, compulsory stay-at-home policies, the closure of schools and non-essential businesses, and ordinances requiring the wearing of face masks, the quarantining of people known or suspected to be infected, and establishing *cordons sanitaires*. Theoretical studies of the effectiveness of NPIs (especially within the context of pandemic influenza) and analyses of historical observational data have led to the common conclusion that transmission can be reduced by rapidly implementing NPIs after the initial detection of a new contagious pathogen.

The sudden appearance of COVID-19 in Italy has provoked a *tsunami* in all areas of the national healthcare system.[6-8] It is most widespread and lethal in Lombardy, which is one of the richest and most industrialized areas in Europe, and has excellent healthcare facilities and medical personnel: nevertheless, a system that is unexceptionable in normal times has proved to be *unsuitable* in the face of such an unpredictable and severe pandemic. The cause of this *collapse* can be found in the organizational model of its healthcare facilities and the lack of synergy between its hospitals and local practitioners during the various phases of the pandemic. This lack of co-ordination inevitably led to the further spread of the disease and the consequent overload of hospital care facilities.

The large number of COVID-19 patients who needed to be hospitalized required the transformation of most internal medicine/specialty beds into COVID beds. For example, at Luigi Sacco Hospital's Rheumatology Unit, all outpatient activity was stopped except for the two-monthly administration of biological agents or small molecules, and five of the seven physicians were temporarily transferred to COVID wards. The hope is that they will be able to return to the Rheumatology Unit by early September 2020.

While making every effort to confront the emergency, the approach to providing care for non-COVID patients has also had to be reorganized, even in areas that have been less affected by COVID-19. For example, like Lombardy, Sardinia has suspended all medical services except those required for urgent clinical conditions. As a result, all of the evaluations of stable patients undergoing follow-up regimens have been re-scheduled.

However, patients can interact with their rheumatologists by means of telephone interviews that allow their clinical condition to be monitored. In addition, we rheumatologists continuously interface with general practitioners in order to establish common strategies for managing individual cases, and our health department has asked whether they would be willing join COVID units in case of need.

As in other Italian Regions, Integrated Territorial Assistance

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Units (UIATs) have been created with the aim of integrating Special Units of Continuity of Care (USCAs) in the home management of COVID patients whose clinical condition means that they do not require hospitalization.

What has happened in Lombardy is obviously something exceptional in terms of the number of patients requiring hospitalization and the speed of the spread of the infection. However, the post-pandemic period will inevitably generate reactive changes in the health policies of all industrialized countries not only because of the increased burden of public debt, but certainly also because of the need for a new structural model for allocating resources to healthcare and its related sectors. This means that we will necessarily have to think about reorganizing the entire healthcare system.

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