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COVID-19: Unforeseen and Unpredictable Pandemic

Summary: The COVID-19 crisis has uncovered a plethora of issues with the health systems in Europe and is predicted to have enormous consequences – both in healthcare and elsewhere. In early April, our EXEC Editor-in-Chief Alexandre Lourenço talked to HealthManagement.org about the challenges hospitals in the EU have been facing and contemplated the changes in health-care, economy and society post-pandemic.

Spread of COVID-19

One very interesting paper (Verity R et al. 2020) analysed the situation on the Diamond Princess cruise ship. In this very closed environment 18% of people who tested positive were asymptomatic. After passengers had been confined to their cabins, the spread of the disease fell substantially. Assumingly, we can extrapolate this proportion onto larger populations.

What we see is that after a number of confirmed cases, if there are no mitigation or suppression measures in place, the infection spreads exponentially. The EU member states were requested to implement measures promoting physical distancing, and this is what they did, some later than others. Some countries resisted to implement such measures, for example the UK, while others, such as Sweden or the Netherlands, were not implementing them instead relying on their citizens' sense of responsibility. But there are also the unfortunate examples of Italy and Spain that have been late to intervene. By the end of March, in Italy 9.5% population had been infected, in Spain over 15% (Flaxman et al. 2020).

Other factors played their role too, of course, such as different perception of physical distancing in different cultures or the density of the population.

Lifting the Restrictions

Without a doubt, these suppression measures are not sustainable and have to stop at some point to ensure viability of the economies. There have been some studies on the economic impact of the 1918 Spanish influenza and COVID-19 (Correia et al. 2020). The results show that the negative impact on the economy without the interventions would have been far greater than that caused by them. And we should keep this in mind while trying to find a balance between the suppression measures and the economic growth.

We live in a big uncertainty, and even though we need to rely on scientific data, no mathematical model can foresee the future developments. There is a joke, "Why did God create

economists? – In order to make weather forecasters look good," and it reflects the current situation well if we talk about epidemiologists.

There is high probability of the second wave once the restrictions are lifted. Therefore, we need a highly effective vaccine, but there is very little chance that we get it from the first trials that are being carried out now. So we have to deal with this uncertainty, trying to protect the population, but also ensuring that the economy functions, even if not grows. In the end, it will be individual countries who have to make the decision, because any epidemiological scenario always depends on the evolution of the epidemic in each country. However, even if the national lockdowns are lifted soon, the travel restrictions will continue to be in place until we have an effective vaccine or treatment.

At the moment it is still too early to make any kind of predictions. So far we only see the number of new cases slowing down – Italy is plateauing, and maybe Spain will follow shortly – but the infection is not yet completely under control and we are still far from solving the problem.

Weak Spots in EU Health System

In the EU, healthcare is a country-level policy. And one of the consequences of the COVID-19 crisis could be increased cooperation at the European level here. We have already seen some signs of it, eg patients from Italy being flown to be treated in Germany, and patients from Spain in France. This cooperation among the member states is encouraging.

Since the beginning of the crisis, we have seen that efforts from the European Centre for Disease Prevention and Control (ECDC) were not enough. The ECDC was developed as mostly non-epidemic observatory and is not fit to deal with a pandemic of this magnitude. Most probably, we will have to strengthen this institution in the future and, in general, to implement a more consistent health policy at the European level.

This would be a positive development, in my opinion. No one was ready for this kind of pandemic. My generation had never seen anything like this, so we just couldn't foresee it. This is why states and multilateral organisations like the EU exist – to try to predict and prepare for consequences. I believe that the EU can be stronger in terms of health policies, to support countries, at least on the public health and civil protection levels, and to sustain the national policies.

Most Important COVID-19 Consequences for EU

This is a million dollar question. I believe that societies in general and health systems in particular will not be the same after those 'war-like' scenes we have been seeing in Italy and Spain.

One of the aspects we tend to overlook is the effect the suppression measures and the focus on COVID-19 care will have on other populations' health needs.

In the short term, the situation will be difficult for chronic patients who are not receiving care due to COVID-19. The mortality rates will increase, as will the demand for this type of care, so the health systems urgently need to develop new strategies to deal with chronic patients' needs.

This crisis can be an opportunity for the substantial growth in eHealth services, especially in telemedicine, which offer an efficient alternative way for non-COVID-19 populations to access healthcare. This can, in fact, lead to a fundamental transformation of healthcare systems. As we see, now both doctors and patients are much more inclined to use the eHealth tools, such as ePrescription, teleappointments, remote monitoring, etc.

The development of telemedicine is in line with another major trend of the recent years – the reduction in what we call 'hospital-centred care' and the rise of community-based care.

Another issue uncovered by the COVID-19 crisis is a lack of properly trained health workforce, especially for intensive care. I think countries have realised by now that they have this problem and need to invest into education and training to be prepared for the future.

The condition of healthcare workforce is yet another concern. In the countries affected the most, the impact on the mental health of healthcare workers will be tremendous. Although we weren't expecting this, it wasn't completely unpredictable.

Interestingly enough, we can see a change in a concept that has gained popularity in recent years, namely a view that our health is a result of our individual decisions. For example, if you exercise and eat properly, your health is better. What we have seen during this crisis, however, is that our health depends on others. This is a major implication to the way societies are functioning and how healthcare should be organised.

Healthcare Economies

When we talk about healthcare expenditure, the lion's share of it goes to care and not prevention, and this might change as a result of the pandemic. I want to hope that we'll see an overall increase in spending on healthcare, on telehealth, on prevention measures. But being realistic, I am not that sure this will happen. If we look at the financial and economic crisis of 2008, back then everyone was relying on public funding to restart their economic activities. As we know, the countries had exited that crisis with very high public debt levels. Even today, the restrictions on public expenditure in the EU continue to be quite severe encouraging countries to reduce their public debts. Therefore, I don't know if countries have the capacity to invest in public health when this crisis ends.

Economic Impact on Our Hospital

Unlike our revenues, the operation costs have inevitably increased. We expect to have them covered by the government, to at least balance the impact on our budget. On the other hand, the way the COVID-19 crisis is affecting our activities is much more profound. For example, we had to postpone most of the elective surgeries, and we are a 1,800-bed hospital that carries out over 60,000 surgeries per year – so the reduction is very high. We also have personnel who are infected or quarantined with suspected infection, so our shift schedule had to be adjusted to allow those workers to safely stay at home and at least try and reduce the risk of the infection spread. There is, of course, the increased need of PPE and ventilators and their constant shortage. A major part of our facilities, such as operating and recovery rooms, had to be transformed to increase our ICU capacity. Our need for trained nurses, intensivists, anaesthesiologists, etc has risen dramatically, and we had to train our personnel to provide intensive care.

All this means enormous changes in care provision and the hospital's configuration. When the crisis is under control, we will start moving in the opposite direction. We still have to see what happens next, but it is already clear that returning to our cruise velocity will be quite hard.

With all this in mind, we rely on our highly qualified and committed staff, who are making a tremendous effort at the moment, and on the community to help us to provide the best service possible to the COVID-19 patients, but also to other patients.

Hospital Bed Capacity

The number of beds always depend on the hospital's needs and practices. Take Portugal, for example. We are one of the countries that has lower number of acute beds. 80% of our surgeries are same-day surgeries, and that's a good thing. Other countries, like Germany, have high number of beds, but they continue to hospitalise patients for diagnostic purposes, for routine surgeries – and this is not good for both the



patients and the system.

One problem that is common for all countries, including Portugal, is the need to deal with what we call 'bed blockers,' the patients who are continued to be hospitalised without the clinical need. We are struggling to develop community services to care for them, which is probably the only approach that could integrate social and health services to deal with this kind of cases.

According to the early mathematical, epidemiological models, we would need four, five times more beds than we have – that's absurd! A healthcare system shouldn't be always prepared for something that might happen once in a lifetime, this would be excessive in all senses.

With the exception of Italy and Spain that were relatively late in implementing the suppression measures, the healthcare systems in Europe have been flexible enough to adjust their ICU capacity. Another example here would be an increase in the European production of mechanical ventilators – we have seen this in Spain, for example, where Volkswagen started to produce this equipment.

Testing Policies and Capacities

Across the EU there are different policies on testing, eg Sweden is only testing patients who need to be hospitalised while Germany has a much broader approach. But this depends directly on the availability of tests. At the European level there is a shortage of tests, so universal testing is simply not possible. Germany, together with some others, is an industrial country, and it could implement its broader policy because it was capable of producing enough tests. Other countries do not have such capabilities.

Besides the tests, there are shortages of PPE and ventilators across Europe. Some EU countries, eg Germany and France, even stopped exporting these kinds of equipment to other countries of the bloc until they had their own needs covered.

Thus, this is not an issue of policies but of the industrial capacity in Europe. The EU should have developed some mechanisms not to allow this, eg create incentives for the European industry to produce enough equipment. But it failed to do so.

WHO, Its Efforts and Independence

At this point and considering the circumstances, WHO has done everything in its power. Most of the Western countries, especially those in Southern Europe, like Italy or Spain, weren't prepared for a pandemic of such magnitude. But I believe that the awareness has been raised on the global level, and not only by WHO but also the UN who put a lot of effort into convincing the policymakers the pandemic is serious. In this sense they all have done a great job. Previous pandemics, like H1N1 or SARS, had left everyone a little disappointed, in a positive sense, because the outbreaks ended up to be not as dramatic as predicted. This time the tremendous efforts

by the international agencies match the circumstances. The ultimate response, however, always depends on the member states and their own contingency plans, and no one was prepared for the infection of this magnitude.

Regarding the influence big companies have on the UN system – I personally think this is a conspiracy theory that one can entertain as they like. I don't believe in it. The funding mostly comes from the member states or private foundations that earn nothing from this. With COVID-19 we don't see any gain for either pharma industry or any of the big donors of the UN system. Specifically for this disease there's no cure. The existing medicines are being tested, eg chloroquine, and others are under development. But none of those will be available on the global scale. We hope, of course, that there will be a vaccine and/or cure, but in any case this is a joint effort by international organisations and the scientific community.

Is COVID-19 a Hype?

I completely disagree. As I have already said, if no measures had been put in place, the number of deaths from COVID-19 would have been much higher than during the 1918 pandemic. All the data point to that.

Also, the economic and social impacts of those deaths would have been tremendous, and here's what I mean by this. In the European health systems, we believe in the universal health coverage and in 'not leaving anyone behind.' This is the core value of our society. Therefore, we cannot just allow a huge proportion of our population to die from one disease in a short period of time – and without the interventions this would've happened in less than a month's time. We cannot allow people to die without clinical care because all the hospitals are overloaded. Waiting for care and not getting it at this scale would be equal to a war scene.

So, no, I don't think this is a 'media hype.' On the contrary, I think that, fortunately, we didn't – and I hope never will – see the full impact of this pandemic. We have seen only a small fraction of it – in northern Italy, in Lombardy, one of the richest areas of Europe with one of the best healthcare systems in Europe, with the highest number of intensive care beds per population in Europe. So we must be grateful that there has been only one example of what could have happened on a global level. ■

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For full references please visit [iij.hm/12xa](https://www.imperial.ac.uk/covid-19/report-13-estimating-the-number-of-infections-and-the-impact-of-non-pharmaceutical-interventions-on-covid-19-in-11-european-countries/)