Flu Season and Coronavirus: Confronting the Double Threat

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In the current state of our world, one can only consider one disease when talking about health problems: the novel coronavirus. In the span of half a year, COVID-19 has pushed away all the old discourse about health and healthcare to the side and recreated it from the scratch. Nowadays, experts seem to only talk about respiratory failures, social distancing norms, the virus spread curves and ICUs. Although with a disaster of this magnitude no one can truly be blamed for forgetting other threats still exist, this still does not absolve the world of its traditional duties and responsibilities. In fact, we need to be extra careful in assessing and countering any possible future threats, so as not to get hit from two fronts at the same time.

Currently, the most imminent of those threats seem to be the approaching flu season, if epidemiologists are to be trusted. In a standard year, seasonal influenza itself causes anywhere between 3 to 5 million severe cases and possibly more than half a million deaths.[1] Nowadays, it is not strong enough to inflict lasting damage on a healthy individual living in an industrialized country, but for people in less developed countries and old or otherwise unhealthy people, it can be a serious threat. As it stands, seasonal influenza is not considered to be a serious world-level threat, but there are major worries that it could become a serious problem when combined with the most dangerous pandemic humanity has ever faced in the last century.

The most obvious threat the flu season poses is the risk of double infection. According to a study in April conducted in North California, 20.7% of the patients who were confirmed to have the coronavirus were also infected with at least, one more pathogen.[2] Ben Cowling, an epidemiologist at the University of Hong Kong, claims that the chance of such double infections are normally low, but get higher if two viruses are in heavy circulation in the same region. According to him, it is very much possible that you can get both at the same time "…if you're having a really bad day.", he says.[3] It seems that seasonal influenza will, this year, be threatening a much wider part of the population, with the risk of double infection.

But direct double infection is not the only way that seasonal influenza might ramp up COVID-19 deaths. Flattening the curve so that hospitals would not be overflooded with people seeking medical care was the go-to response for many countries against the pandemic. Meaning that going over the capacity of the hospitals was seen as a worst-case scenario. This flu season threatens us with just that. A particularly bad flu season can stretch the capacity of healthcare systems around the world to the end, as the 2017-2018 season did. In that season, the capacity of the U.S healthcare system was almost reached, and at one point in time, there were more patients in need of hospital beds than there were manned beds in hospitals.[4] In

[1] https://www.who.int/en/news-room/fact-sheets/detail/influenza-(seasonal)

[2] https://jamanetwork.com/journals/jama/fullarticle/2764787

[3] https://www.scientificamerican.com/article/coronavirus-and-the-flu-a-looming-double-threat/

[4] https://www.healio.com/news/infectious-disease/20190205/bad-flu-seasons-test-us-hospitals

conclusion, going over capacity this winter seems like a very real threat for the health industries of all countries around the world.

Yet, there are still some aspects of this situation that might give us hope. It has been over half a year since the world became deeply acquainted with COVID-19 as a pandemic, and in that time, humanity has adopted many measures on individual, business, and state levels. Individuals are encouraged, if not outright enforced to wear masks when they go out. On top of that, every individual now boasts a more effective hygiene routine than a year ago, with more frequent cleaning sessions and more products to ensure greater hygiene. Most businesses now outright refuse to serve consumers that do not wear masks and large-scale businesses employ measures such as mandatory body temperature checks at the gates and strategically placed disinfectant bottles and masks. All states now have international and intranational practices in place to combat viral spread, and all of them are now more experienced with a viral pandemic than before. Notably, a significant amount of hospitals now have emergency practices and crisis management routines set in stone, along with increased capacity. And most importantly, social distancing and quarantining have become a part of societal expectations and norms. All these will contribute to slowing the spread of influenza in a never-seen-before manner. The data we have so far seems to agree, as well. A study done by researchers of the University of Hong Kong, showed that the flu had lower transmission rates than ever before after the COVID-19 measures were implemented[5] A similar pattern was observed in the United States, where the number of flu cases sharply plummeted after COVID-19 was declared as a pandemic.[6] If the measures for the novel coronavirus is kept in place, the world will most likely have an easier time dealing with this year's seasonal influenza.

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Another piece of optimism-inducing information is the fact that generally speaking, two separate cases of viral disease spreads tend not to hit their peaks at the same time. This not-yet-completely-understood fact is a glimmer of hope as well. This situation is especially prevalent when the different kinds of viruses are similar in the manner of operation. COVID-19 and seasonal influenza both being respiratory viruses, it is likely that they will not peak at the same time. As stated before, this phenomenon is not fully understood, but it is thought to be caused by temporary immunity boosts created by different viruses affecting each other. Nevertheless, mathematical modeling and simulation, as well as historical data show a clear asynchronous pattern.[7]

Additionally, although their modi operandi are similar, there is one key difference between the COVID-19 and seasonal influenza: One of them has a tested and working vaccine. A vaccine for the novel coronavirus does not yet exist, but the same is not true of the seasonal flu. Moreover, flu vaccines are affordable, do not cause significant side-effects, and mostly non-allergenic, a fruit of many years of work that went into their creation. If a substantial amount of people get their flu shots, the seasonal flu could very well become a much more minor issue. An influenza vaccine reduces your chances of falling sick from the flu by up to 60%, an already significant percentage, but if enough people are vaccinated, society as a

[5]https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(20)30090-6/fulltext

[6] https://www.cdc.gov/flu/weekly/index.htm

[7] https://pubmed.ncbi.nlm.nih.gov/31843887/

whole would benefit from herd immunity, which further slows the spread of the virus.[8] Experts claim that the best time to get vaccinated is as soon as possible, but in the worst-case scenario, you should get your shot before the end of October, as the vaccine can take up to two weeks to go fully in effect.[9]

Concluding, we must note that we do not know what this flu season will bring. There are facts and studies that are worrying, but also facts and studies that give us hope. Even experts are not capable of pinpointing where the situation may evolve. The confusion is caused partly by the chaotic nature of viral diseases and partly by the ambiguities in the actions of peoples and governments going forward. It is hard to see now what the ultimate result will be, but we can safely say that the tighter the coronavirus measures are, the safer we all will be during the flu season. Yet, no matter what happens, it seems that another hard period is ahead of us.

[8] https://www.cdc.gov/flu/vaccines-work/vaccineeffect.htm

[9] https://www.cpr.org/2020/09/21/flu-season-and-the-coronavirus-what-you-need-to-know-this-fall/