A conversation with a physician in Italy regarding the COVID-19 pandemic

Interviewer Justin Haas

Dr. Paolo Mazzola

Dr. Paolo Mazzola is a geriatrician and palliative care physician at San Gerardo Hospital in Monza, Italy, just north of Milan, serving a population of 850,000 people. He is an Assistant Professor at the University of Milano-Bicocca and spends most of his time working in a subacute geriatric care unit. In 2014 he was selected to participate in the 64th Lindau Nobel Laureate Meeting of Physiology and Medicine (Lindau, Germany). He was awarded the "Person-in-Training Award" by the Gerontological Society of America (GSA) in 2015, and he was recognized as "Fellow in Geriatrics and Gerontology" by the Italian Gerontological and Geriatrics Society (SIGG) in 2016. He also received the Young Talents Award by the University of Milano-Bicocca in 2018.

Dr. Mazzola has extensive experience learning and practicing medicine around the world. As a medical student, he was fortunate enough to go on exchanges in Istanbul, Turkey and in Chiba, Japan. He then spent a portion of his post-graduate studies in Geriatric Medicine at the Texas Tech University Health Sciences Center, and in 2012 he completed a post-doc research fellowship and performed aging research in Italy. In 2013 he moved to New York City where he worked as a visiting research fellow in Neurology for 2 years at the Icahn School of Medicine at Mount Sinai Hospital. He is a committed and ambitious clinician-scientist who has tirelessly worked on the frontlines in the most hard-hit region of Italy – one of the first nations outside of China to be considered an epicentre of the COVID-19 pandemic.

UTMJ: Dr. Mazzola, could you describe the initial response to the onset of COVID-19 at your hospital?

DM: The initial response was quite shocking, happening almost immediately after we had moved our entire geriatrics unit to a newly renovated ward. Our hospital is quite large; it is a single complex comprised of three sectors (A, B, C), each with 12 floors, and the day after our move, the COVID-19 emergency began. Our ward was among the first to be mandated an isolated area, together with Internal Medicine and the Emergency Department.

Rumors of a new Coronavirus outbreak in Wuhan, China were spreading in January and reported in the media. Knowing how many people travel to Italy from abroad, we all had a feeling that this infection would strike Italy soon as well. I was among the people who optimistically believed that the dissemination of this novel virus would be contained – that we could be control it with adequate public health measures. However, as you probably know, the situation in Italy rapidly developed and after seeing the severity of this disease in the first few patients who were infected in my ward, I quickly changed my mind. This disease appeared to be a very severe respiratory syndrome – changeable and fluctuating in nature, even on a daily basis.

At first, all treatments we were administering had to be validated, but many of us were unfamiliar with these treatments, meaning that in just a few short days we had to learn how to use them and how to use them quick. The ICU rapidly reached capacity with the most severe cases, while other departments—including mine—were transformed into semi-intensive care units where high-flow oxygen devices and specific drug therapies would be administered. The Acute Geriatrics Unit on which I work was already familiar with complex cases of older people experiencing one or more disorders in the context of multiple chronic comorbidities. However, we had to "power-up" our daily routine because suddenly all hospitalized patients became complex. I think we did a good job in quickly and efficiently upgrading our knowledge in order to care for these patients, and I am proud to say that despite the intensity, our overall attitude was and still is positive despite our very real risk of being infected

UTMJ: What do you think your hospital did well in responding to the rapidly evolving situation in Italy?

DM: I feel that our hospital's administration reacted appropriately and quickly to face this emergency. Fortunately, the acute hospital setting is more-or-less suited to face emergencies like this – we had specialists with expertise and an initial availability of protective equipment available to use. A multi-disciplinary task force called the "Unità di Crisi" ("Crisis Unit") was rapidly assembled, headed by several key specialists in Infectious Diseases, Anesthesiology, and Emergency Medicine, along with hospital management and the directors of each department. They held daily meetings about how to face the rapidly changing outbreak, and how to best adapt wards and shifts in order to guarantee the best possible assistance to each arriving patient. The efforts to arrange "COVID-19 paths" and "COVID-free paths" in our hospital was a good step in managing the magnitude of patients and in allocating resources.

Many services (in particular, outpatient services and elective surgery) were temporarily cancelled, and all students' classes, activities, exams, and internships were suspended.

Only residents were allowed to continue clinical activities, requiring that they give up their current apprenticeships for an undefined period of time in order to flank senior doctors in a new and strenuous routine. I must say that being a University-affiliated hospital really helped us face COVID-19. Our shifts always consisted of paired senior physicians and residents (1:1), and this benefited everybody so much.

Unfortunately, protective equipment was quickly becoming used up, and Italy as a country was not adequately prepared for this exponential increase in the need for these materials. International blocks in shipping and delivery also began occurring, and as a result, we all made an effort to conserve the little masks and protective equipment that we had left. Ultimately, however, we all knew that our hospital would never let us practice without adequate protection, which I believe was the right call. I consider it a great achievement that, despite all the challenges faced in providing us with this protective equipment, no one at our hospital ever worked without it.

My colleagues and I did not underestimate our risk, and luckily none of us working on "Geriatrics COVID 8B" were infected or quarantined. I realized that the spread of this deadly virus would not be contained geographically, and so, as much as possible, I paid attention to and trusted in the protocols in place to protect ourselves against the virus. Unfortunately, however, two young residents out of 25 did test positive for SARS-CoV-2 in the first few days, which was frightening, but in hindsight it was discovered that this probably occurred due to family contacts. They ended up having mild symptoms and were isolated at home, where they recovered and returned to work after about two weeks.

UTMJ: What has been the most difficult part of this experience for you?

DM: From an academic perspective, I do not think that the COVID-19 pandemic has changed my attitude regarding research and clinical practice. As physicians, we are familiar with searching and reading the most recent literature on a daily basis, and in facing this pandemic, it has been crucial to stay up to date about symptoms, presentation, and atypical features. Crucial, but not difficult, because this is not really different from what we do normally.

Emotionally, it has been a difficult challenge for me and my colleagues to face.

People usually says that those who work in geriatrics are kind of "accustomed" to dealing with the end-of-life experience. However, I do not feel that this is true. I have not, nor do I think I will ever fully become accustomed to the experience of dealing with dying. In the first days of the pandemic, we found ourselves suddenly faced with many patients (from "young-old" to the "oldest-old") suffering from severe pneumonia related to SARS-CoV-2 infection. For some of them, the severity of their presentation was shocking, and we were almost immediately able to understand based on how dire their situation looked that many were not going to make it. Indeed, despite a number of efforts and treatment strategies formulated with care by a specialized multidisciplinary team, the mortality rate in the elderly was high. It was hurtful to talk to these patients and their family members day-by-day, on one hand working to make the former as comfortable as possible, while on the other having to make the latter understand the painful message that their loved one was going to die, and that they would not be able to be reunited with him or her during this process.

During this pandemic, many people in Italy and around the world have died, including several healthcare professionals. I personally knew some of them, and not being able to be together for even a last farewell has also been hard – especially considering how the pandemic and risk is still ongoing.

UTMJ: What are you most afraid of when you go into work and how do you cope with this fear?

DM: My biggest fear is to bring the virus home to my parents or fiancée – Martina. I am in a strange situation right now: Martina and I scheduled to get married in September, and we were in the process of organizing the next steps of our life together. Due to home renovations, we were staying in the same building as my parents. The lockdown restrictions stopped all renovations just as they were going to finish, so we have unfortunately had to stay close to my parents, avoiding contact with them as much as possible. The possibility of infecting them is therefore always at the back of my mind.

For myself, however, I can tell you that, while cognisant of the risk to my own health, I am not afraid. I can also say that many of my colleagues share this perspective. Everyone realizes his or her own risk, and in my case, I am still quite young, with no chronic health conditions. I therefore take some solace in the probability that my risk of serious complications if infected are likely low, though I of course still do everything I can to prevent infection. That said, however, even though I work on a geriatric ward, due to overcrowding, we have also admitted cases of young people (between 30 and 40 years old) who presented with severe symptoms and underwent a difficult course.

The risk will never be "zero", when you do this job. Luckily, I am able to sleep well at night (except for when I have the night shift, once a week), so that I can get to work and try as hard as possible to remain positive for the next day.

UTMJ: Given that you work primarily with the elderly, can you describe what this virus does to your average patient medically, emotionally, etc.?

DM: We have observed many different presentations, and a number of them could be considered "atypical" because of the absence of cough, fever, dyspnea and other more typical signs. International literature describes scenarios concordant with these observations. For example, Nickel

and Bingisser described a case of an 83-year-old man who came to the Emergency Department for a fall with thoracic trauma, but the CT scan showed bilateral subpleural ground-glass opacities in the absence of fever and cough. He also resulted positive for SARS-CoV-2 swab, confirming the suspect of COVID-19. Like this, we have also observed some cases of "incidental" findings of COVID-19 among patients who came for other reasons, ultimately and unsuspectingly testing positive with a swab.

Another interesting patient was one who came to us with delirium, abdominal pain and low-grade fever in a 94-year-old man. He was rapidly deteriorating even after antibiotic treatment for infection of an unknown source, later thought to be a suspected community-acquired pneumonia. Only after he died, did a post-mortem swab indicate that he had had SARS-CoV-2! This is interesting because delirium is an atypical presentation that could mislead physicians, probably because delirium is a relatively common condition in the elderly.

Importantly, we have seen that older people who come to us frequently experience delirium as a complication during their course of COVID-19. Frail elderly patients are at a higher risk of delirium and other complications, which in turn demands a progressively more intense consumption of residual physiologic reserve, increasing their mortality rate. We cared for several patients who came to us with a COVID-related pneumonia but ended up dying of incident complications superimposed on their overall frailty. Describing this progressive deterioration in cognition and attention to their loved ones has been hard, often exacerbating the pain felt with being physically distant from them during this time.

UTMJ: Could you give us an anecdote about a particularly impactful patient under your care?

DM: Each patient leaves a mark on you. At the end of March, I admitted a 72-year-old man in overall good health except for a marked visual impairment due to previous multiple retinal detachments. He had mild symptoms but had swabbed positive for SARS-CoV-2. He was not married and was living with his own sister at home. At first, it seemed his course would not be complex, but his daily telephone calls with his sister made me worry, because of her shaky voice, interrupted with coughing. I suggested that she treat herself symptomatically but informed her that she was at a real risk of having been infected as well. As I had suspected, she was admitted to our ward only a few days later. Despite her role as caregiver with her brother, she was ultimately older than him with more comorbidities. Her situation was grave, and her condition worsened rapidly. At this time, her brother was doing better but worried; discharge from hospital without his sister would also be very complicated because of his visual impairment. Luckily, the situation evolved positively, both of them recovered, ultimately being discharged together. They were truly grateful for the assistance, and we were all really moved by their tears.

Many patients treated by us did not have stories that ended so well, of course. However, the positive stories keep me going, and every patient reminds me about the importance of staying up to date so that the care that I provide each patient will be better than the patient before.

UTMJ: What do you want medical professionals in other countries, such as those in Canada, to learn from your experience in Italy? Do you have any advice for medical students who are watching this as they enter the field?

DM: Honestly, the real difference from country to country is the availability of resources: i.e. the number of professionals per capita, healthcare facilities, devices, medications, etc. What I think should be remembered from the rapidity with which the pandemic struck Italy is that in our profession we must always be ready to face emergencies, regardless of their magnitude. A few years ago, a bad road accident happened: 50 people early in the morning were waiting for a bus to go skiing in the Alps, when a drunk driver coming out from a bar ran over them. It was Sunday morning, 6 AM, and we were immediately informed that many injured people were coming to our hospital. I was younger but I remember it very well. The point being that we may never know when we will be faced with tragedy, and that preparedness for such tragedy does not necessarily have to be learned from a pandemic to be applied to a pandemic.

If I may advise medical students, I would like to say to them to be ready, because your role as young professionals entering the world of medicine is both needed and helpful – even if you lack the experience that you may think you need to help. In Italy, many young doctors and nurses, freshly graduated, were enrolled in territorial services, and while it was challenging for them at times, they have been invaluable in the response.

UTMJ: Do you think any positive change will result from this pandemic? What do you hope to see in the future?

DM: The SARS-CoV-2 pandemic has taken many things from us – friends, family members, loved ones, and a sense of certainty and security in our world, enlightening the fragility of global healthcare systems in the face of something as small as a virus.

I hope that we have learned the meaning of "finiteness" for resources, and that it is possible to live while respecting the environment and sharing what we have. Politics, for one reason or another, often do not take into account the interests of a nation, the environment, or its resources… and we have seen that governments may prove incapable of being able to promptly understand the needs of its citizens and their own health. I also hope that grappling with severe but necessary recent public health measures has made people understand the importance of being responsible for not only themselves, but also for the society in which they live and its more vulnerable populations.

I am optimistic about the future, however, because it seems that almost all of the world's many researchers and private companies have refocused their efforts toward counteracting COVID-19. I cannot foresee how long will it will take, but I am confident that we will obtain more than one positive change in tackling this disease in the near future: better tests, more directed treatments, more effective supportive therapies, and of course, a vaccine. Even in my own hospital, it was interesting to observe the launch of several simple ideas that bolstered our response, such as 3D-printed valves named "Charlotte" that converted commercial snorkels into emergency oxygen masks by connecting them to the ventilator machine's body.

Ultimately, humankind always finds brilliant solutions when the time comes.

UTMJ: Thank you so much Dr. Mazzola for your work, and for speaking with us.

DM: You're welcome.

Acknowledgments

This interview reflects the perspective of Dr. Paolo Mazzola and does not represent the opinion of either ASST Monza nor University of Milano-Bicocca regarding the COVID-19 issue.