Title: The Experience and Perplexities of the COVID-19 Situation in Pakistan

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Discussion Points:

1. Academic Hurdles
2. Limited awareness and understanding of the effects of the virus in populations of developing countries.
3. Unique Challenges faced by health-care staff in Pakistan
4. False Negative Results of Reverse Transcription Polymerase Chain Reactions (RT-PCR) test for COVID-19
5. The role that pre-clinical and clinical students can play during and post lockdown

THE EXPERIENCE.

The coronavirus disease 2019 (COVID-19) has progressed into a full-blown pandemic within a short span of time. Pakistan has been one of the countries that initially fared better with an early response and a nation-wide lock-down starting on 1st April 2020. It was able to slow the spread. However, since people paid no heed to the warnings during the annual Muslim festival of Eid-ul-Fitr there was a massive spike in the number of daily new cases. The rise started on 26th May and peaked on 14th June, when 6825 new cases in a day were reported. Afterwards began a gradual decline however this unfortunately was short lived. With the world in the throes of a second wave of COVID (beginning in October of this year in Pakistan) it really seems like certainty is nothing more than a mirage.

I am a third-year medical student in one of the public sector medical colleges of the country. This pandemic has provided the medical student community a chance to witness situations never expected or experienced before. While some of the experiences have been constructive (e.g., actually experiencing a public health emergency), others have highlighted certain deep-rooted problems which still exist in Pakistan's healthcare and education sectors.

Student Experience

From 1st April till date the situation has remained ever changing. Early on, there was no sense of alarm and academic schedules continued on as usual. It was only after the first cases were reported that some sense of uncertainty started to seep in. The government acted promptly, and all educational institutions were closed. This closure lasted till September of this year but with the recent alarming second spike in new cases, institutions had no choice but to shut down again following a government order that was issued on 26th November.

Unsurprisingly medical education is in a state of disorder. While some medical colleges scrambled to complete on campus final examinations in the short interval between the two closures (following all measures recommended to reduce the transmission risk) others decided to delay them even further. The best course of action for professional institutions to take is in much contention with students, parents and health authorities all having differing opinions.

Online learning has put forth a whole new set of unique challenges in Pakistan. Asides from the more apparent issues of accessibility to electronic devices and connectivity issues as many students belong from far flung areas with minimal access to the internet. Nationwide recorded lectures are actually not utilized in a lot of places. This poses an interesting comparison with other medical students worldwide in developed nations, with Liu, an American medical student, writing that most of their lectures were already recorded online pre-pandemic and hence there was no major shift in learning modality unlike what has been faced in my part of the world.[1] The rapid implantation of such a teaching pedagogy has been a huge adjustment for students and teachers alike to learn from and deal with software such as 'Google Classroom'. Another problem is that online case discussions or even patient simulations in the rare instances that such software is available simply cannot replace hands-on clinical training. Many ward rotations have had to be missed with students only completing the minimum number of required training hours during the time that colleges re-opened. This is similar to the situation in India,

with Kalra et al. writing early on in the pandemic clinical rotations had been suspended altogether. [2] One can imagine that while didactic teaching may have continued at more or less the same pace, the effect the pandemic has had on clinical teaching in medical education has yet to be fully quantified.

At one point we heard a rumor that third-year medical students would be called to volunteer in their respective teaching hospitals. Even without the aforementioned difficulties of hospital exposure being cut short, third year students already have minimal clinical experience. A lot of medical colleges in Pakistan follow a non-integrated or hybrid system of study, that means in the first three years basic science subjects are mainly taught and examined. So, while third year students do attend wards and receive some clinical training, the knowledge gained is not formally tested in the end of year promotional exam. Hence anyone can imagine the subsequent panic that we all felt at the mere possibility of being called into hospitals with our still very shaky history taking skills. However, thankfully, this rumor never transpired.

While it is still undeniable that students can perform useful tasks in the hospital as seen elsewhere around the world, it must be considered that developing countries such as Pakistan simply do not have the resources available to supply the required training and PPE to volunteers.

On the brighter side, this lockdown has banded medical students together in a bid to help those around them. A large percentage of our population consists of daily wagers, who have been hit hardest in this lockdown. During this time numerous ration drives have been started throughout the country to raise money for those most vulnerable in our society. With the poor spiraling into even deeper poverty, it was an undoubted fear that starvation could also be the cause of many deaths. There has also been a sharp decline in blood donations with people staying home. So, medical students have carried out awareness campaigns highlighting the plight of Thalassemia patients during this difficult time. Blood donors have also been identified and donations arranged for affected families.

Stories from Seniors in the Hospital

Seniors have been regularly filling us in about the situation they are facing on duty. The lack of trained work force, scarcity of Personal Protective Equipment (PPE) and the fear of contracting the illness being common themes. I have also gotten used to hearing various unique dilemmas for example many hospital staff from rural areas, with low salaries share rooms with each other in urban centres. Clearly, this is not ideal, as many now face the predicament of sharing rooms with potentially COVID-19 positive colleagues as they cannot afford to self-isolate or they risk going home and exposing their families. People refusing to send their relatives to the hospital for fear that their dead bodies will not be returned, and no funeral prayer will be performed. Doctors are being pestered by distressed relatives. Worst of all, seeing fellow colleagues contracting the illness. Up until 21st October it has been reported that 87 healthcare workers have lost their lives to this virus with around 8272 infected.[3]

While flowers and billboards thanking essential health care staff are warm gestures (Figure 1-2) what they really need are adequately equipped treatment facilities and a compliant sensible population ready to take their advice.

Dealing with Public Myths

A large percentage of the population is not able to see the devastating effects that the disease can bring if simple precautions are not carried out. With a literacy rate of 58%, it becomes the duty of medical students in developing countries such as Pakistan to spread awareness and a depth of understanding to those around them. Especially when met with statements that I myself have been told such as: 'Why should I wear a mask? Covering your face is a women's duty' (referencing to the 'niqab'-a face veil), 'Corona doesn't exist', 'Never go to the hospital for treatment. Doctors will inject you with poison', 'The hospital is one of those few places with one entrance and no exit' which unfortunately are commonplace. A lot of the time denial can run in our own families. It is because of this careless attitude frontline workers are being put under phenomenal amounts of risk. We as students can play a vital role in dispelling such self-harming ideologies by carrying out awareness campaigns. Such campaigns will also be useful once a vaccine is widely available as the public may require encouragement to get vaccinated. In fact, trials involving the CanSino COVID-19 vaccine candidate are currently underway in three major hospitals of Pakistan and we are hopeful that it will be available next year. [4]

Personal Experience

Lastly was the experience of my father, a practicing physician, becoming unwell with COVID-19. Although Reverse Transcription Polymerase Chain Reaction (RT-PCR) tests repeatedly came out negative he was finally diagnosed on High Resolution Computerized Tomography (HRCT).

False negative results as reported by many studies, may simply occur because of taking the test too early, poor sampling techniques and suboptimal transportation.[5-7] In fact in a certain study 75% of the patients who had a negative RT-PCR result had positive chest Computerized Tomography (CT) findings. Hence CT scans have proven to be much more accurate in diagnosis.[8] This information is important to disseminate to those around us as negative testing can become the sole reason for people not to self-isolate.

My father was undoubtedly among the few lucky patients in Pakistan who was able to receive prompt treatment which included many coveted drugs in short supply such as Remdesivir. Other drugs also in short supply are Tocilizumab. Dexamethasone, on the other hand, is widely available and was being given to seriously ill patients in Pakistan even before it's life-saving action in ventilated patients was announced.[9] Unfortunately, many treatment options remain unaffordable for many in our population.

An important aspect gained from this personal experience was to realize and understand a patient's and family's perspective and stresses in such a difficult time.

Conclusion

COVID-19 is far from over. It is a situation that all of us can contribute to no matter how small. It does not matter if medical students cannot actively play a role on the frontline. We can support the doctors there in other ways such as: by raising awareness, convincing people to self-isolate and dispelling any misconceptions. With hard work and a positive attitude, I am sure we will remember this time as a great opportunity and driver for positive change in healthcare systems worldwide.

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FIGURES

Figure 1. This poster shows a tired doctor who is making a pledge with herself to 'stay awake till morning' with a responding statement 'the nation salutes you-thank you'. Metropolitan Corporation Islamabad.

Figure 2. This banner states 'Thank you for your bravery in the war against Corona Virus-The civil society of Pothohar region'.