



## Mucormycosis risk mitigation in the COVID battle

### Mucormycosis:

1. The new fear after the treatment of COVID-19, especially in an ICU setting, is contracting a severe disease known as mucormycosis. This is a serious, but rare, fungal infection caused by a group of fungi known as mucormycetes.
2. Mucormycosis usually affects people who have poor immunity, and those with uncontrolled diabetes have the highest risk of developing it. Other risk factors of mucormycosis include steroid treatment, those who have malignancies, HIV/AIDS and those who have been treated with medicines such as deferoxamine for iron overload conditions.
3. When the COVID-19 infection takes a more serious turn, heavy doses of steroids are given to the patient as a life-saving measure. Unfortunately, this can precipitate new-onset diabetes in those who do not have diabetes or substantially raise blood glucose levels in those persons who already have diabetes. This sets the scene for the development of mucormycosis.

### Sugar control, steroid use

1. It is very important for those with diabetes to keep their sugar levels under very good control. The dose of antidiabetic drugs will have to be adjusted and, in most cases, insulin would be needed to keep the sugars under control throughout the day.
2. If steroids have to be used, their judicious use is recommended. For e.g., steroids should be given only at the appropriate stage of the disease, in optimal doses, and for as short a period of time as possible.
3. Meticulous hygiene and care of the equipment inside the ICU including oxygen tubes and ventilators should be done in order to reduce the risk of fungal and other infections.
4. Steroids reduce one's immunity and may actually increase the risk of developing COVID-19. Also, in the initial phase of viremia (the medical term for viruses presents in the bloodstream), the use of steroids can actually disseminate the virus widely, thereby worsening the COVID-19 infection.
5. It is only when the cytokine storm is suspected, (which usually occurs in the second week of the COVID-19 infection) that steroids should be used, and that too with discretion.



## Reforming medical education

### Health System: North-South and Rural-Urban Divide

1. India's health systems have been confronting numerous challenges. In order to effectively address these challenges, our health systems must be strengthened.
2. One of the critical building blocks of the health system is human resources. The serious shortage of health workers, especially doctors, in some northern States is a major impediment to achieving the health-related Sustainable Development Goals.
3. Health workers are critical not just for the functioning of health systems but also for the preparedness of health systems in preventing, detecting and responding to threats posed by diseases such as COVID-19.
4. The workforce crisis has been aggravated by the imbalances within the country. For instance, the doctor-population ratio in northern States is far short of the required norm, while the southern States, barring Telangana, have enough doctors in possession. There is also a general lack of adequate staffing in rural areas.

### Shutting out the poor

1. These health system challenges will remain largely unaddressed with the government's market-oriented approach towards medical education.
2. There is no denying that in order to meet the significant shortfall of qualified doctors in northern States, scaling up of medical education is warranted.
3. However, certain proposals, such as the NITI Aayog's proposal of allowing private entities to take over district hospitals for converting them into teaching hospitals with at least 150 MBBS seats, may sound attractive but there are reasons to be deeply concerned.
4. Through the implementation of such a policy, the private sector in medical education will be encouraged; it will also directly aid the corporatisation processes of healthcare provisioning while the under-resourced public health system will be collateral damage.
5. District hospitals are considered as the last resort for the poor. This will change. The corporatisation will make the services very costly and exclude them from getting care.
6. Even from the perspective of producing more doctors to meet the shortages in under-served areas, this is unlikely to yield the desired result.



7. Private players treat medical education as a business. Thus, it would shut the door on a large number of medical aspirants who would otherwise have a strong motivation to work in rural areas but do not have the means to finance themselves.
8. Additionally, the medical graduates trained in such private sector 'managed' medical colleges will prefer to find employment in corporate hospitals and not in rural areas to regain their investment.
9. Further, this proposal is not aligned with India's national health policy goals like achieving universal health care and health equity. Instead, it will widen health inequalities further.

Solving doctor shortage, therefore, needs long-term thinking and commitment from the political leadership. The government should learn from previous cases of public-private partnerships (PPPs). Many PPPs had to be shelved owing to the non-compliance of the agreement conditions by the private sector under which they were also supposed to cater to the non-paying patients.

### **A public good**

1. Medical education is a public good as its purpose is to improve the population health and decrease disease burden. The pandemic has provided us an opportunity to make medical education a public good once again.
2. There should be a substantial step-up in public investment in medical education. By establishing new medical colleges, the government can increase student intake as well as enhance equitable access to medical education.
3. Besides, it must allocate adequate financial resources to strengthen the overall capacity of existing medical colleges to enrich student learning and improve output.