

Perspective

Pulse oximeter as a household instrument : Does it help or aggravate the situation ?

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With the advent of the current Covid-19 pandemic, there have been a lot of changes in our daily life. Common medical concepts like hypoxia, ARDS and acquired immunity have entered public discourse and there has been a surge in the sales of portable medical instruments for home use. In September, *The Tribune* newspaper reported that medical stores in North India were selling 800-1000 Oximeters a month. An e-commerce website of India registered a 300% increase in the demand for portable Oximeters all over the country.

Such portable personal care medical instruments are quite useful. They help the patients in taking charge of their own health and makes telemedicine easier. Any epidemic with high morbidity like Covid-19 will always overwhelm the existing health infrastructure and a significant number of the patients will be managed at home. For such cases, home-use medical instruments are highly recommended. In fact, many state governments in India (like West Bengal) have officially recommended home monitoring of oxygen saturation in their official guidelines.

However, sudden surge in the use of a new technology also gives rise to some confusion and miscommunication. As the common public started using this new device, there was a lot of misunderstanding. For example, it was very common for people to get alarmed at mere one point drop in the SpO₂ reading. Many a doctor in India has been the recipient of frantic calls from patients, who had become anxious about their readings dropping from 99 to just 98%!

In the author's experience, some people also thought that SpO₂ was something that can be compared between patients, as an indicator of recovery. The author even had to face a situation where two patients in a family were given the same treatment for Covid and both got clinically better. But one of them had SpO₂ of 99% while the other had 96%. This second person got very depressed that she was "not getting better" like her other family member. Also for example, for anyone recovering from Covid, if the family members found the SpO₂ dropping from 98% to 96% in one day,

they would get unduly anxious that "the disease was coming back". It becomes very difficult to explain the concept of "normal range" as opposed to a single "normal value" for human body parameters. In another situation, a person had 99% oxygen saturation, while his other family members had SpO₂ between 94 and 97. This person thought that he was "healthier" than his family. So, instead of trying to understand the nuances of this parameter, most people had a simplistic explanation for the machine reading. Many people started doing breathing exercises like "Pranayama" with the hope that deep breathing would raise the SpO₂ value.

The pulse oximeter has been recommended for use in confirmed Covid cases only. However, many people without any illness also bought it and started using it for screening purposes. For any minor sneeze or pharyngitis, or a little dyspnoea (may be even due to anxiety), they would use the meter; and if the value fell below their expectations, they would be seeking medical consultation. In a time when the health sector is already stretched to its limit, such unwanted influx of "patients" is highly undesirable. Many people have started equating health with oxygen content of the blood and even repeated reassurances would sometimes fail to convince them that they had no disease. This is somewhat similar to the overuse of blood pressure instruments or weight scales at home.

The interaction between man and machine is always a fascinating study for the medical anthropologist. The study gets even more intricate when the machine in question is a medical device. In the author's experience, the common person often develops an unassailable faith in the readings displayed on the LCD screen. The questions of technical error or biological variations are often relegated to the background. Instead of paying heed to the overall feeling of well-being, it becomes an obsession to check the machine readings repeatedly to get assured of health. People try to transfer their anxiety on to that device and the LCD screen reading becomes the beacon of hope.