

Respiratory Care

Insights on access and affordability

In this article, Vinay Joshi discusses respiratory care during a time when vaccinations are the hot topic. He also provides insight on access and affordability for respiratory care in Asia, and future challenges for remote respiratory healthcare.

Vinay Joshi, Chief Executive Officer, ABM Respiratory Care

COVID-19 has created a shortage of ventilators globally. What do you think is the way forward for respiratory care in Asia with the advent of vaccinations?

COVID-19 has created awareness of ventilators and the importance of respiratory care. The people who battled COVID-19 and survived will need to continue to manage their respiratory care, regardless of whether they receive a vaccination. Recovering lung function and maintaining lung health is a life-long journey after COVID-19. People will need to keep their lungs healthy to live their life to the fullest. Additionally, we are seeing mutations of COVID-19 globally so the need for ventilators will not go away.

The pandemic has highlighted a shortage of ventilators and a shortage of trained healthcare professionals to manage the large volume of ventilators when needed. In addition, frequent bedside visits by healthcare professionals to adjust and monitor ventilators increase the infection risk thereby pushing an already fragile healthcare system into a further grim situation. Our ventilator addresses both issues by enabling healthcare professionals to securely monitor and adjust ventilator settings through their online portal from any location.



Could you provide some insight on access and affordability in respiratory healthcare in Asia?

In general, access to healthcare in rural areas is a challenge. Asia has a diverse population and their access to respiratory healthcare is influenced by social, economic, and environmental factors. Access to respiratory healthcare in Asia varies greatly between countries. There is ongoing work to accelerate equal access to everyone through policy initiatives and strategic contracting of services by health ministries. Digital technologies can expand access to respiratory healthcare in rural areas of Asia. Resource constrained health systems in rural and remote regions

could benefit from shared resources available via digital health and telecare solutions. These types of remote respiratory care solutions can provide affordable healthcare, through reducing out-of-pocket payments, reducing the cost of traveling long distances and reducing lost wages from missing work.

What challenges do you foresee for the field of remote respiratory healthcare in the next five years?

I see a rise in tele-health over the next few years. However, tele-health platforms need to evolve to allow a more holistic approach to managing patients at home. This includes the ability to capture diagnostics remotely, video conference

and share information across the entire care team.

Additionally, with the rise of tele-health, data security could be a concern. Tele-health platforms need to enhance their security to ensure the protection of patients and healthcare providers information.

Providing access to tele-health technology in remote areas is a potential challenge. The pandemic is unlikely to ease up in the short term. In areas where hospitals are overburdened and there is a severe staff shortage compared to the number of patients, caring for and managing critical patients in their own homes is ideal for reducing the burden on healthcare systems. The challenge I see here, is how to make intensive care unit (ICU) technology accessible and scalable in environments outside the hospital.

Our ventilator has huge potential to save lives not only in hospital networks, but also the most remote parts of the globe. Produced at less than half the cost of a normal ventilator, our ventilator increases access to hospitals and countries. The ventilator is also able to connect to any Wi-Fi or cellular hotspot and thus is easy to set up. As it can be accessed and managed remotely, it will help to reduce the burden of healthcare professionals and healthcare systems.

What are the solutions for addressing the urgent need for ventilators for COVID-19 patients? What are the challenges you have seen or encountered thus far in implementing these solutions?

The COVID-19 pandemic not only highlighted a shortage of ventilators but also a shortage of trained healthcare professionals to manage the large volume of ventilators when and where needed. In addition, frequent bedside visits by healthcare professionals to adjust and monitor ventilators increase the possibility of infection through continued exposure. The solution is to move treatment out of the ICU as soon as possible, either into a step-down unit

Recovering lung function and maintaining lung health is a lifelong journey after COVID-19.

or outpatient setting where the same care can be delivered at a lower cost. The challenge is how to make the complex technology needed to manage COVID-19 and other respiratory compromised patients more accessible and scalable in the environment out of the ICU.

ABM Respiratory Care is focused on providing a solution for scalable, remotely managed ventilation as well as broader lung health. COVID-19 damages people's lungs so airway clearance therapy, beyond ventilation, is needed to ensure the lungs are able to get the oxygen to the blood and remove the buildup of carbon dioxide.

When novel respiratory viruses are suspected, such as the novel coronavirus that caused COVID-19, how do you think other current severe acute respiratory infections should be managed? What should be the protocol?

There is an intermediate step which has to happen, and that is what will

happen in next five years, which is making devices more connected, more intelligent, and making them so simple that they can be used not just in the hospital, but outside the hospitals as well.


New challenges demand novel approaches to advance the standard of care in treating chronic and acute respiratory diseases and conditions—wherever and whenever needed. That's what the future holds for lung health and that's what my team is focused on delivering today.

The challenge is how to make complex lung health technology accessible and scalable outside the hospital. Post-COVID care will require managing complete lung health, from ventilation to airway clearance with intelligent and integrated care solutions. That means integrated airway clearance designed for at-home use. It means tele-ventilation to ensure scalability. And it means platform-based remote monitoring to keep patients connected and potentially reduce readmissions.

Do you have any other comments on respiratory care during the current pandemic situation?

I think in a post-coronavirus world, there will be a strong shift towards healthcare at home for patients with more intelligent and connected devices. Medical devices always seem to lag in terms of connectivity and ease of access as compared to banks, Ubers and Twitters of the world and that paradigm has to change if we want to prepare ourselves for the future. ■

AUTHOR BIO



Vinay Joshi is an entrepreneur with two decades of experience in the medical device industry. In addition to managing early-stage start-up companies, Joshi held senior roles with GE Healthcare and Hill-Rom, where his responsibilities were focused on respiratory health products in the disciplines of product development and marketing. At GE Healthcare, he worked on diagnostic imaging and life support systems like ICU ventilation. At Hill-Rom, he worked on their airway clearance product portfolio