

## Creating novel remote respiratory care management ecosystem in APAC

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In conversation with Vinay Joshi, CEO at ABM Respiratory Care



Acute respiratory distress syndrome (ARDS) is a complex and acute condition with very high mortality. Managing people with ARDS requires advanced clinical lung mechanic knowledge to ventilate and maintain clear airways so the lungs do not sustain damage. The key challenges in any delivery of healthcare during a pandemic or in remote geographical regions are similar which are primary resources and reach. With COVID-19, simply having ventilators available will not meet the patient need as current ventilators are designed to be operated in a specific setup by highly trained clinical personnel. The pandemic has resulted in strained healthcare systems; there is a lack of trained healthcare professionals to manage the ventilators being used around the world. **Vinay Joshi**, CEO of ABM Respiratory Care shared more insights on respiratory care surge amidst the pandemic.

### **How advantageous is Remote respiratory care management in this era of pandemic?**

When ventilation is needed for thousands of people, there needs to be a solution to enable the management of numerous ventilators. The solution encompasses not only connectivity, but a thoughtful design of the devices to leverage the connectivity. Built in intelligence and a user-friendly interface allow trained healthcare professionals the ability to monitor, make informed care decisions, and update programming as needed.

A connected and intelligent respiratory care platform at ABM collects data and provides optimal lung protection and ventilation advice. These ventilation platforms and lung management devices combine lung expansion therapy with

oscillations to break down the mucus and open collapsed airways. The remote management platform allows trained healthcare professionals the ability to monitor, make informed care decisions, and update programming as needed. In complex scenarios, such as ARDS, based on lung condition data and outcomes in the future, which will aid healthcare professionals to drive ventilation strategy better and save more lives. This is one of the areas where AI's potential may be significant given the complexity of the condition and the high mortality rate. With the recent Series A funding, biWaze Airway Clearance therapy device and other product pipelines are being developed.

**What are the potentials of 3-D printing technology in building ventilators for delivering novel therapeutic solutions?**

3D-printing technology can be leveraged in ensuring supply of certain consumables and valves in difficult-to-ship regions, instead of waiting for weeks for critical valves, connectors or masks, these parts can be remotely printed at the place of use. There are also opportunities for personal customization of patient interfaces for long term or chronic patients. Challenges of mask misfit and skin breakdown in patients can be minimized if the masks can be custom-made for patients at a reasonable cost. This model works very well in the hearing instruments industry where the fit and comfort of long-duration use of the device is essential.

**With the growing demand for respiratory devices amidst COVID emergencies, how do you foresee APAC respiratory care market?**

In addition to APAC, we foresee that globally, healthcare will continue to move towards remote management of patients with the goal to keep people out of the hospital. This shift in healthcare will create a new opportunity for respiratory care devices outside of traditional ventilators used in ICU and hospitals. We also foresee COVID survivors having long term damage of their lungs that will require respiratory therapy. This will create a need for novel airway clearance therapies in APAC region which are currently a care standard in regions like USA and Europe.