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Critical self-reliant healthcare life-supporting supply chain to emerge post COVID19

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During prevailing global shortfall of ventilators, Singapore's medical device company has invented a solution to tackle facility acquired infection and tedious manual ventilator monitoring process through 'remote access' via an online portal to combat COVID-19

Singapore based ABM Respiratory Care, a medical device company focused on the development and commercialization of airway clearance and ventilation solutions has developed an innovative ventilator which helps healthcare professionals monitor and program the device from anywhere in the world in real-time. ABM is preparing for fast-track approval of its Tele-Ventilator with regulatory agencies in several countries, including Singapore. Biospectrum Asia explored more on the prevailing Global ventilator demand-supply crisis with **Mr Vinay Joshi, CEO and Head QA RA, ABM Respiratory Care.**

- **In the context of the current COVID-19 global pandemic, how do you think the MedTech industry will evolve?**

We will see an overhaul in post-COVID-19 world. And one of the most critical changes that I foresee is self-reliance. Nations will try to become more self-reliant, not only in terms of critical life support equipment but in terms of the overall supply chain for these devices too. Connectivity will have a whole new dimension in the post-COVID world. Innovation in terms of connectivity will peak, even more so in the healthcare space where home health and teleconsultation solutions for critical patients will be more prevalent. The current crisis has highlighted a huge dependency on hospitals and the wide gap that still exists in taking healthcare truly home.

- **There is a huge fallout of demand-supply of ventilators at a global level currently. How does BiWaze™ ION will help address these demands?**

BiWaze™ Ion has a very scalable and simplified design and, in a few weeks, when we start production, we will be able to scale up to meet large demands in a short time by replicating the set up in multiple locations. While we foresee existing ventilator companies clustered primarily in Europe and the USA eventually meeting the demand in those regions, a larger population ranging from Asia, Middle East and Africa will face severe shortages of ventilators. BiWaze™ Ion production will be able to cater to all these needs in a short time.

- **According to you, what are the on-ground issues of conventional ventilators especially during critical COVID-19 situation?**

Currently, there are two classes of ventilators we are seeing: existing ventilators which are designed for life support and are truly safe, but we are also seeing a lot of companies and start-ups from unrelated industries claiming to have created new ventilators in weeks or a couple of months which have not undergone rigorous testing or do not meet specified safety standards. There are high chances of mortality in using the second kind of ventilators and we are very concerned about these ventilators given that it requires just 3 minutes of ventilator breakdown with no alarms to kill a patient.

Conventional ventilators, though safe, are not designed for mass usage and skill shortage scenarios. The connectivity ecosystem in the medical world is cumbersome and complex to setup. Smarter ventilators based on new technologies are the need of the time where they work out of the box and enable access to healthcare providers anywhere in any place.

- **Amidst the emergence of AI and IoT enabled medical devices, how unique is IoT- enabled Tele-ventilators developed by ABM?**

Medical devices are typically 20 years behind the current innovations in digital age and connectivity, BiWaze™ Ion leverages new-age technologies which are used by leading multi-national banks, Ubers and Twitters of the world, for speed and real-time interaction. This combined with our management portal and access control provides a simple, responsive and secure mechanism to manage our ventilators.

BiWaze™ Ion works out-of-the-box and one doesn't need any IT team in the hospital or home. The steps to operate this are very simple.

- Switch on the ventilator and connect to nearest wi-fi or hotspot and it works magically
- Login to the portal to manage the ventilators

The ABM login helps manage all Ion ventilators from a single dashboard from anywhere in the world. Our in-lab demonstrations and testing are typically done between the USA and Singapore.

We strongly believe that this technology will save many lives and for the post-COVID world, this would serve as the backbone to introduce any useful AI for these devices in future.

- **Which are the key markets for you, both in terms of manufacturing as well as in terms of a product launch?**

We are currently focusing on Asia, including Singapore and India, as we continue to work with regulatory agencies in these regions due to limited time. We believe we will be able to cater to the rest of Asia, the Middle East and Africa as we ramp up production. We are also open to collaboration in other regions, wherever we can use our technology to save more lives.

- **When is the launch of Tele-ventilators? Are there any collaborations or partnerships with healthcare bodies wherein the product will be seen functional during COVID19?**

BiWaze™ ION has been in production for the last 30 months. We already have functional devices which have undergone rigorous testing for continuous use, as well as connectivity setups. We also have established supply chains and are already creating inventories. We would be able to start full-fledged BiWaze™ Ion production line in a few weeks.