

## Industry Speaks

## The future of breathing – Advances in ventilator technology

Aditya Kohli, CFO & Director, Allied Medical Limited



Medical ventilators have come a long way in recent years, thanks to technological advancements and emerging trends making them more effective, user-friendly, and accessible. Ventilators are crucial machines used in hospitals to help patients who have trouble breathing independently.

Let us explore some of the exciting developments in this field. Traditionally, ventilators were bulky and stationary, confined to hospital settings. However, new portable ventilators are lightweight and can be used at home or during transport. This portability is essential for patients with chronic respiratory conditions who need constant support.

Modern ventilators come with advanced monitoring systems that provide real-time data on a patient's respiratory status. These systems adjust ventilation settings automatically based on the patient's needs, ensuring optimal support. This reduces the burden on healthcare workers and increases patient safety.

The latest ventilators feature int-

uitive touchscreens and user-friendly interfaces. This makes it easier for healthcare providers to operate them, reducing the chances of errors. Simplified interfaces also mean less training is required to use these machines effectively. Ventilators are now designed to integrate seamlessly with electronic health records (EHR). This connectivity allows for better patient data tracking and helps make informed decisions quickly. It also aids in the coordination of care among different health-



care providers.

Technological advancements have led to the development of new ventilation modes that can be tailored to individual patient needs. Modes like adaptive support ventilation (ASV) and proportional assist ventilation (PAV) are more comfortable for patients and can improve outcomes. Artificial intelligence (AI) and machine learning are incorporated into ventilators to predict patient needs and adjust settings in real-time. This technology can also help detect potential problems early, allowing for prompt intervention. Innovations are also focused on making ventilators more affordable.

Low-cost, high-quality ventilators are being developed for use in low-resource settings, ensuring more people have access to life-saving respiratory support. These advancements and trends are transforming the landscape of medical ventilation, making it possible to provide better care to patients, streamline healthcare processes, and ultimately save more lives.