

Health and Human Services (HHS) spurs innovation to develop next-generation portable ventilator

Acknowledging that low-cost, user-friendly, flexible ventilators are needed for pandemics and routine care, the U.S. Department of Health and Human Services announced it will sponsor the advanced development of a next-generation portable ventilator to help fill the need. The new ventilator will be developed under a three year, \$13.8 million contract with Philips Respironics of Murrysville, Pennsylvania.

In a severe influenza pandemic and potentially in other public health emergencies, a large number of severely ill patients would require mechanical ventilation. This number could overwhelm the capacity of the health care system to provide such care, both in the number of ventilators available and staff trained to operate them.

“An affordable portable ventilator will help us meet the needs of critically ill patients during a public health emergency, whether due to a naturally occurring pandemic or an act of bioterrorism,” states Robin Robinson, PhD, Director of Biomedical Advanced Research and Development Authority within the HHS Office of the Assistant Secretary for Preparedness and Response, the group responsible for overseeing the project.

The ventilator in development will be a reduced size and low-cost (currently cost from \$6,000 to \$30,000 per unit) and will be designed in a way that doctors, nurses and other health professionals can operate without special training. The ventilator will be required to meet the needs of everyone from infants to the elderly.

In addition to aiding in response to a public health emergency, the next-generation ventilator in development can have important implications for routine care. The modernized features, agility and ease of use can improve patient care for triage in the field or advanced treatment in the hospital.

“Ventilators Market to 2020 – Technical Advances and Hospital Expansion Serve as Distinct Regional Growth Drivers”

by Market Research Reports is now available. The report’s promotion states that the global ventilators market was valued at just over \$765 million in 2013 and will exceed \$1 billion by 2020. The report states that while the increasing prevalence of Chronic Obstructive Pulmonary Disease (COPD) will continue to be the primary driver of market growth, new technologies will also make a crucial contribution.

The senior analyst of this report says: “The already-high prevalence of COPD will be exacerbated by the aging population, leading to more critical care admissions, where the use of mechanical ventilation is common.”



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International Ventilator Users Network's mission is to enhance the lives and independence of home mechanical ventilator users and polio survivors through education, advocacy, research and networking.

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- ▷ The increasing preference for noninvasive ventilation in the developed world will be another significant trend over the forecast period, with Europe currently leading the United States in the adoption of these systems. The research attributes the low penetration of noninvasive ventilation in the United States to the lack of efforts towards increasing respiratory therapy and nursing time. Furthermore, there is an inaccurate perception that additional time is required to implement this treatment method.

Labor Department Delays Minimum Wage and Overtime Protections for Home-Care Workers

The U.S. Department of Labor in October granted a six-month delay in enforcement of a new rule applying federal minimum wage and overtime provisions to home care workers employed by “self-directed” Medicaid consumers.

In October 2013, the Labor Department said that the wage protections would take effect on Jan. 1, 2015, but in its recent announcement the department said that it would not enforce the rule for six months through June 30, 2015. For the second six months of the year, it said it would exercise “prosecutorial” discretion in bringing enforcement actions against employers that decline to pay minimum wage or overtime.

Under the new rule, home-care workers would have to receive the federal minimum wage of \$7.25 per hour and time-and-a-half when they work more than 40 hours a week. When the new rule was announced in 2013, the Labor Secretary said, “Almost two million home-care workers are doing critical work, providing services to people with disabilities and senior citizens,” but are “lumped into the same category as babysitters.”

Several states, facing budget constraints, had complained to the Obama administration about the cost. Home-care industry officials warned that the increased costs of the new rule could make families unable to afford home care and could push disabled American and seniors older than 65 into nursing homes, increasing costs for governments.

But the president of an advocacy group for home-care workers, criticized the announcement, saying, “The decision to delay means that two million workers – largely low-income women, and disproportionately women of color – will have to wait as long as another 12 months to receive even the most basic labor protections ...”

HAMILTON-T1

Hamilton Medical now offers a new neonatal option* for the HAMILTON-T1 transport ventilator. During transport, it delivers the same performance as a fully featured NICU ventilator at the bedside.

The specially adapted hardware and software meet the needs of ventilated neonates. Supporting tidal volumes of just 2 ml, the HAMILTON-T1 allows for effective, safe and lung-protective ventilation for even the smallest preemies. The neonatal flow sensor accurately measures pressure, volume and flow proximal to the patient. This guarantees the required sensitivity and response time, and prevents dead space ventilation. The new neonatal expiratory valve can balance even the smallest differences in pressure and offers the neonate the possibility to breathe spontaneously in each phase of a controlled breathing cycle.

In addition to all modern neonatal ventilation modes, the HAMILTON-T1 offers a new generation of nCPAP. With the new nCPAP-PC (pressure control) mode, the ventilator automatically and continuously adapts to the desired CPAP target value accommodating for the patient’s condition and possible leaks.

The ventilator has approvals and certificates for most types of transport and situations and is reliable everywhere, both inside and outside the hospital, in the air as well as on the ground.



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◆ The rise of sleep medicine and the difficulty in getting sleep labs to distinguish between sleep apnea and hypoventilation, the main cause of respiratory insufficiency for people with NM conditions.

◆ Increase in vent use by people with COPD, Obesity Hypoventilation Syndrome.

◆ How to decide if and when to have a tracheotomy.

◆ How to communicate unique needs to medical professionals, particularly when surgery and anesthesia are discussed.

Headley and Fischer urged helping ventilator users survive the system by:

◆ Utilizing IVUN's extensive resources.

◆ Listening to what patients say.

◆ Advocating with and for patients.

◆ Taking a team approach that considers emotional and psychological as well as medical needs. ■

From Around the Network continued from page 3

The built-in high-performance turbine makes it completely independent of compressed air, gas cylinders or compressors.

This saves weight and space and even noninvasively ventilated neonates can be transported over long distances. The combination of a built-in and an optional hot-swappable battery provides a battery operation of more than 9 hours. This can be extended indefinitely with additional hot-swappable batteries.

For details see: www.hamilton-medical.com/products/hamilton-t1.html

*Currently available in EU and EFTA member states and other countries that recognize CE marking. Regarding availability in other markets, contact HAMILTON MEDICAL. Not yet available in the USA.

November is COPD Awareness Month

Chronic Obstructive Pulmonary Disease (COPD), an umbrella term used to describe progressive lung diseases, encompassing emphysema, chronic bronchitis, refractory asthma and severe bronchiectasis, is the only disease in the United States to have increased in frequency over the past three decades – killing women at almost double the rate in some states.

While there is no cure for COPD, the COPD Foundation (www.COPDFoundation.org) aims to promote change and awareness in how individuals with COPD are treated – and ultimately how to save lives. ■

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