

ACQUISITION OPPORTUNITY

Pacey ClearVent Tube (PCT)

Secretion Clearing Endotracheal Tube System For Inadequate Ventilation Perfusion During Critical Care



Inventor

- Dr. John Pacey, MD FRCSC
- Vascular & General Surgeon
- Inventor of *GlideScope*
- University of BC Medical School
- Honorary Professor of Anesthesia
- Recipient of Distinguished Service Awards

Offering

- Products, designs and specifications
- Seminal patent portfolio, global coverage
- Trademarks and brand name recognition
- Knowhow, including clinical knowledge

The Need

- Ventilator-Associated Pneumonia (VAP) is 2nd most common CCU, ICU and ED infection
- VAP occurs in 300,000 cases annually and is responsible for 50% of all ICU use of antibiotics
- VAP is the number 1 cause of death among nosocomial infections and increases hospitalization cost by \$50K per patient
- Infections are primarily caused by endotracheal secretions
- Secretions requires multiple scheduled and unscheduled nurse-induced suction events
- Suction events increase potential of bacterial contamination causing infections
- Inadequate suction may also plug lung passages, causing abnormalities and atelectasis

VAP, Dr. Fraser, Washington University School of Medicine, 2019.

Global Endotracheal Tube Market (Millions \$)

Worldwide market for Endotracheal Tubes is expected to grow at a CAGR of 3.3% over the next five years reaching 640 million US\$ in 2024 from 530 million US\$ in 2019.

Source: *The Expresswire*, October 31, 2019

Technology Readiness Level

- PCT has been extensively tested and is ready for peer reviewed studies in ICU & OR
- Proven with Biotek Ventilator Tester paired with a Puritan Bennett 7200 ventilator
- Successfully tested on adult pigs at the Jack Bell Research Centre at Vancouver General Hospital in Canada

The Opportunity

Blackhawk Technologies, LLC is exclusively representing a client to find an acquirer for its Pacey ClearVent Tube secretion clearing endotracheal tube System (PCT) to enable its technology to be fully commercialized. The PCT was invented by Dr. John Pacey, who is also the inventor of *GlideScope*, the first commercially available video laryngoscope. PCT is superior to the current methods because it is the only system/technology which continuously clears endotracheal secretions and improves oxygenation during ventilation in intubated patients.

Over 300,000 patients in the US receive mechanical ventilation each year putting them at risk of acute lung infections such as pneumonia. These infections are primarily due to inadequate clearing of the endotracheal passage secretions resulting in 50% of all ICU antibiotics, extended stay of over 15 days and increased cost of \$50K per patient (Zimlichman et al., 2013 and VAP Dr. Fraser, Washington University, 2019). PCT is the only technology which continuously clears these secretions during normal ventilation. The benefits include a reduction in infections, less dependency on the Respiratory Care Team thereby reducing nursing time and resources, and reduced medical care costs.

The Technology

The PCT is designed with two distinct channels; Inspiration Channel (IC) is for passage of clean O₂ enrichment air and moisture, and the Expiration Channel (EC) is for removal of CO₂ enriched air and secretions in the exhaust gases collected in the Secretion Collector (SC). The two channels combine at a junction into a conventional endotracheal tube which is shorter for reduced CO₂ pushed back into the lung in each cycle. The junction is placed behind the tongue. The tube then passes through the vocal cords and uses a conventional cuff to provide a seal in the trachea. It is recommended that the PCT be placed with *GlideScope* Video Laryngoscope or other similar method of visualization to allow the medical professional to accurately place the junction point at the epiglottis level.



Disruptive Technology Advantages

- PCT is disposable and works with existing conventional ventilators
- Proven to continuously clear secretions during normal ventilation
- Suctioning is conventional and done through the exhalation port
- Methodology is designed to CO₂ in the system at each cycle
- Collects secretions for bacteriology and volume measurements
- Provides a smaller lumen diameter to pass the vocal cords
- Ideal for robotic surgical procedures on the airway
- Reduces nursing time and resources and therefore cuts cost
- Avoids neglect or poor judgement due to care team fatigue
- Reduces ventilator related infections such as pneumonia
- Adapter for bag ventilation (RT.)



PACEY CLEARVENT TUBE (PCT)

