

## ENDOTRACHEAL TUBE-RETAINING DEVICE

*Low-cost, disposable device, containing an integrated bite block, for easy insertion and fixation of endotracheal tubes and prevention of tooth damage and occlusion of the tube*

### BACKGROUND

Endotracheal intubation is performed during anaesthesia as well as due to distressed airways in emergency situations. In most situations, the endotracheal tube is inserted and kept in place by sticking the protruding tube to the cheek of the patient using adhesive tape. This can often cause unsightly facial blemishes post anaesthesia, and the presence of facial hair or fluids, such as blood, might present the adhesive from sticking and movement of the tube once inserted. Certain patients also experience a biting reflex when coming off the anaesthesia, which might cause damage to their teeth and even bite on the tube, blocking airflow. Endotracheal tube holders are available, however these are costly and often only maintain the tube fixated but do not protect the patient's teeth or prevent occlusion of the tube when biting reflex occurs.

### TECHNOLOGY DESCRIPTION

Jirehsa Medical (Pty) Ltd has developed an internationally patented, low cost, disposable medical device for retaining either endotracheal tubes or laryngeal mask airways during anaesthesia. It is self-inserted prior to anaesthesia by the patient and enables simple endotracheal intubation and fixation. It includes a tube fixation function, to maintain the tube in place and prevent movement, even if fluids are present and without the need for adhesive tape. The integrated bite block prevents the life-threatening occlusion of the tube by patients during recovery, as well as chipping or damage to the patient's teeth. In addition, the device enables the anaesthetist to rapidly re-intubate the patient in the event of airway blockage following tube removal. None of these safety features are possible with the present fixation methods.

### VALUE PROPOSITION

This unique, low-cost, rubber, disposable device (1) allows for easy and safe insertion of the endotracheal tube and fast

re-intubation if necessary; (2) fixes the endotracheal tube in position through a secure clamp, overcoming the need for fixation using adhesive tape onto the patient's face; (3) prevents movement of the endotracheal tube once in position; (4) through its integrated bite block, prevents tooth damage and possible occlusion of the tube caused by patients' biting reflex. These potentially life-saving safety features, ease of insertion and use means that the device should become part of every anesthetic procedure on a global scale.

### CURRENT STATUS

Prototypes of the device have been developed and tested on patients by anaesthetists. An independent clinical trial will be conducted on the device by a Professor of Anaesthesiology at the University of the Free State in the second half of 2019.

### INTELLECTUAL PROPERTY STATUS & PUBLICATIONS

Patents on the device have been granted in all the European designated countries (UK, France, Germany, Spain, Ireland and Italy) as well as South Africa, Australia and the USA.

### OPPORTUNITIES

The technology developers are seeking partners for the commercialization and international marketing of the product as an intubation device to be used in the anaesthesiology and emergency medical services sectors.

#### FOR MORE INFORMATION PLEASE CONTACT:

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