



**UNIONE EUROPEA**  
Fondo europeo di sviluppo regionale



Regione  
Lombardia



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POR FESR 2014-2020 / INNOVAZIONE E COMPETITIVITÀ

## Asse 1 POR FESR 2014-2020

Public presentation of pre-commercial public procurement procedures for the development of new technological solutions for the creation of “a safe bronchial suction system” (gara ARCA\_133)”

Palazzo Lombardia Milano, 11 July 2018

### ***TRACHEOBRONCHIAL SUCTION: definition***

Mechanical removal of secretions from the bronchial tree by a suction source and a tube inserted into the airways through a natural way (mouth or nose) or artificial (respiratory prosthesis)

### ***TRACHEOBRONCHIAL SUCTION: goals***

- to remove secretions to keep the airways open
- to improve oxygenation and reduce resistance in the airways
- to stimulate the cough reflex
- to collect biological samples for laboratory investigations

## PROBLEM AND STATUS QUO

Tracheobronchial suction is an invasive action, to which some significant complications can be related

INFECTIONS

HYPOXEMIA

AIR HUNGER/ANXIETY

ALVEOLAR COLLAPSE

VASOVAGAL REACTION

TRACHEAL LESIONS

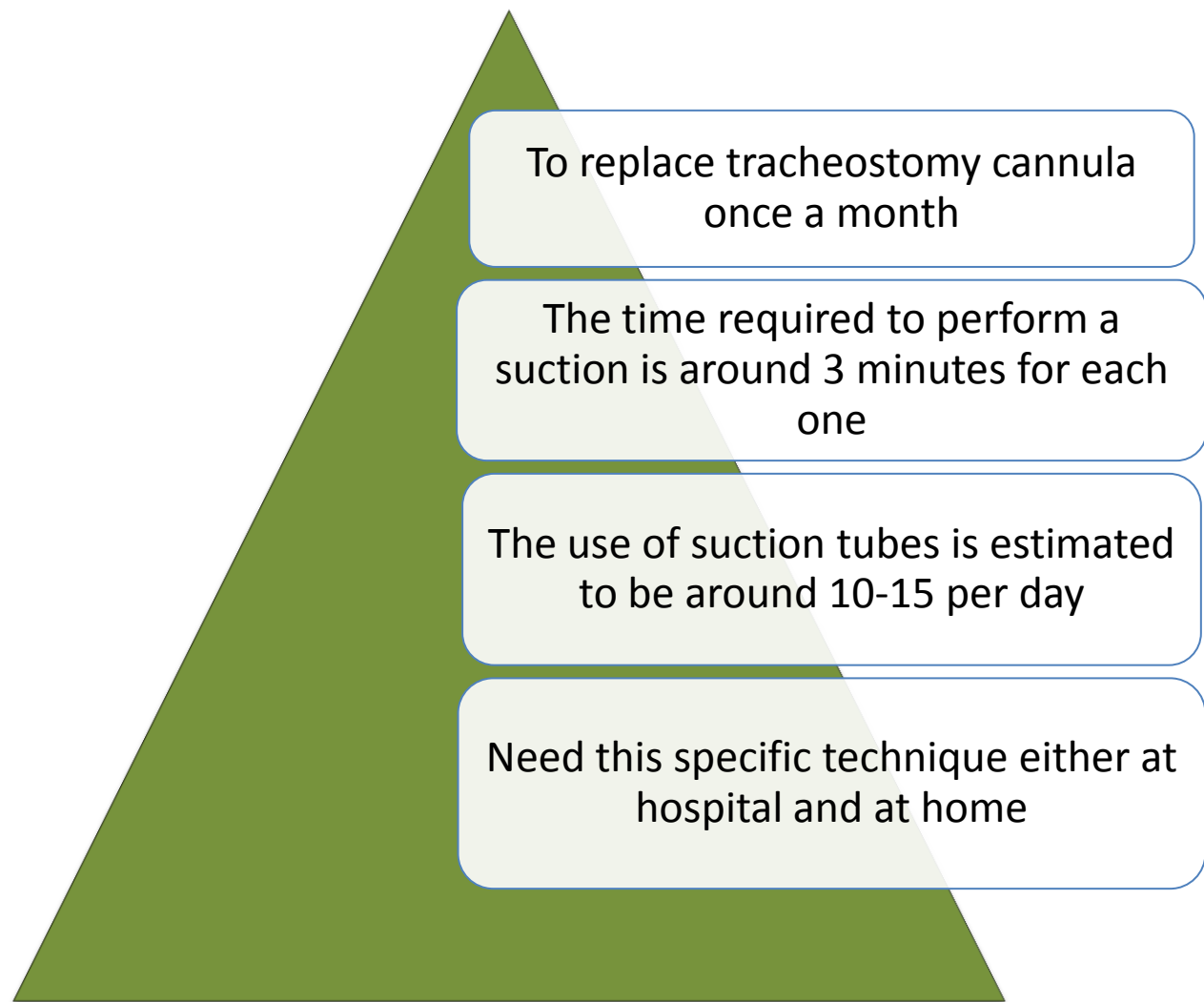
## PROBLEM AND STOTUS QUO



This maneuver is currently carried out trough specific device and materials in order to ensure adequate ventilation.

## PROBLEM AND STATUS QUO

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The requirement consists of a safe bronchial suction device that eliminates the risk of clinical complications such as granulomas, infections and bleeding of the tracheal mucosa, while ensuring a lower use of execution time, a reduced use of material and allowing compliance to the best guidelines and evidence based practices.

## REQUIREMENTS OF INNOVATIVE SOLUTION

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### MINIMUM REQUIREMENTS

#### The innovative solution must

- ✓ be applicable to all people carrying tracheostomy cannula, especially for those who do not require mechanical ventilation
- ✓ not increase the traction on the cannula
- ✓ be able to be used safely even by non-professional people, in every situation of daily life
- ✓ the tube is inserted into the tracheostomy cannula with a sterile technique
- ✓ had to respect the times and the pressures foreseen for a correct execution of the suction

## REQUIREMENT OF INNOVATIVE SOLUTION

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### MINIMUM REQUIREMENTS

The innovative solution must

- ✓ to be able to execute the maneuver according to the most updated health guidelines
- ✓ reduce complications linked to trauma, infections, hypoxemia and mechanical lesions



## REQUIREMENT OF INNOVATIVE SOLUTION

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### MINIMUM REQUIREMENTS TO SET UP AND MANAGEMENT

The innovative solution must

- ✓ reduce the number and price of materials used for the suction
- ✓ ensure cheaper management prices
- ✓ delate or decrease the enviroment impact

## REQUIREMENT OF INNOVATIVE SOLUTION

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### MINIMUM REQUIREMENTS TO SET UP AND MANAGEMENT

#### The innovative solution must

- ✓ respect work safety and medical devices laws (general requirements and design)
- ✓ easy to teach (health professionals and caregivers), to use and to set up (without the need for calibration and adaptation)

## REQUIREMENT OF INNOVATIVE SOLUTION

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### MINIMUM REQUIREMENTS TO SET UP AND MANAGEMENT

The innovative solution must

- ✓ be compatible with all plugs in all European countries
- ✓ not require technical professional to manage them
- ✓ to ensure cheap price to set up



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