


## Introducing the Speaking Valve: Letter to Editor

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### Letter to Editor

#### Abstract

Patients with a tracheostomy for any reason usually do not have speech or swallowing. Lack of communication and swallowing problems negatively affect all aspects of the patient's life. By attaching a speaking valve on the tracheostomy tube, patient's speech, swallowing, and cough can be facilitated, and aspiration would reduce. The use of a speaking valve also restores patient's sense of smell and taste, and usually facilitate decannulation process. In developed countries, most physicians and clinicians are familiar with and prescribe speaking valves, but Iranian medical community is still unfamiliar with the speaking valve and its benefits. At present, this tool is not available in Iran for patients and even medical staff, and is not practical. It seems that by conducting clinical studies, advertising, and holding training workshops for clinicians, the level of awareness of medical community and patients about the use of speaking valves and its benefits can be increased.

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### Introduction

Tracheostomy is one of the most common surgeries in the intensive care units (ICUs) (1). Patients who have had a tracheostomy for any reason are unable to speak and often have difficulty swallowing. Lack of communication and swallowing problems affect all medical and health care, social interactions, and also mental health of the patient (2,3). Nevertheless, the use of a speech valve can facilitate the patient's speech, swallowing, and coughing and reduce aspiration (4). The first speech valve was introduced in the United States in 1985, and so far, studies on its benefits have been published in the United States, Australia, Spain, France, and Japan (5).

Speech valve is a one-way airflow valve that is mounted on a tracheostomy tube without a cuff or with a discharge cuff (3). Many health care providers in developed societies are familiar with speech valves; as they often have access to different brands of speech valves (3,4). These speech valves are available in different sizes, designs, and resistances around the world, and numerous studies have been conducted in the United States, Australia, Spain, France, and Japan (1-6), however based on a comprehensive review, it seems that in Iran, no applied study has introduced speech valves, and patients and even the medical community are still not familiar with speech valves and the benefits of using them. It is noteworthy that despite the fact that an Iranian company used to import one of the old types of these valves in a limited way, the market research shows that this tool is not available inside the country for patients and even medical staff, and its use continues to be abandoned; especially with the recent currency price fluctuations, the cost of purchasing a device from the same old model will now be more than 50 dollars.

The speech valve is open during inhalation and the patient can import air to his lungs through it, but closes on exhalation to allow the exhaled air to flow to the larynx, mouth, and nose (2). Therefore, the patient can talk through it. By restoring the positive pressure of the airways, the speech valve enhances coughing and better control of secretions, in addition to improving the protection of the airways during swallowing (3,4). As a result, it reduces the risk of aspiration (6). The use of speech valves also restores the patient's sense of smell and taste (3). Some

speech valves can be used simultaneously with a mechanical ventilator (6). Additionally, the use of speech valves often facilitates the tracheostomy removal process and is used before testing the blockers and cannula caps (3,6).

Contraindications to the use of speech valves that should be evaluated by a speech-language pathologist (SLP) or tracheostomy team include severe behavioral problems, unconsciousness or coma, cognitive impairment, severe instability of the disease (especially pulmonary insufficiency), trachea stenosis or severe edema, obstruction of the airway above the tracheostomy tube, excessive semi-liquid and secretion after valve installation, lack of emptiness of tracheostomy tube cuff, removal of whole larynx, insufficient air flow around the tracheostomy tube, patient's inability to maintain proper breathing, skin color change, increased restlessness, stridor, snoring, shaking of the head, or other symptoms of anxiety (3,5,6).

The above issues raise the need to introduce and conduct studies on the use of speech valves in Iranian society to increase the level of awareness and improve the experience of the medical community and patients. It seems that by conducting clinical studies, extensive advertisements, and holding educational, scientific, and practical workshops for therapists, it is possible to increase the level of awareness of the medical community and patients about the use of speech valves.

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### Conflict of Interest

There was no conflict of interest in this study.

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