

# What do patients with laryngectomy expect from the next generation of vocal assistive systems? A qualitative and quantitative analysis of users' needs and expected improvements.

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## Scientific context:

Literature indicates that there is a high variability among patients who have undergone laryngectomy procedures, in terms of success of the recovery and satisfaction using different vocal assistive methods.

The project “Mobile System for Rehabilitative Vocal Assistance of Surgical Aphonia” aims to develop a new system for assisting these patients, and information regarding their needs is available only to a little extent.

## Objectives:

- (1) assess the satisfaction of patients and their caregivers with voice assisting methods available today;
- (2) identify main problems that they are confronted with in every-day life
- (3) identify the needs or requirements that should be addressed by new vocal assistive technologies
- (4) test users' reaction to a new assistive method implying the use of a smart-phone for voice synthesis based on text-to-speech and / or automatic lip-reading software.

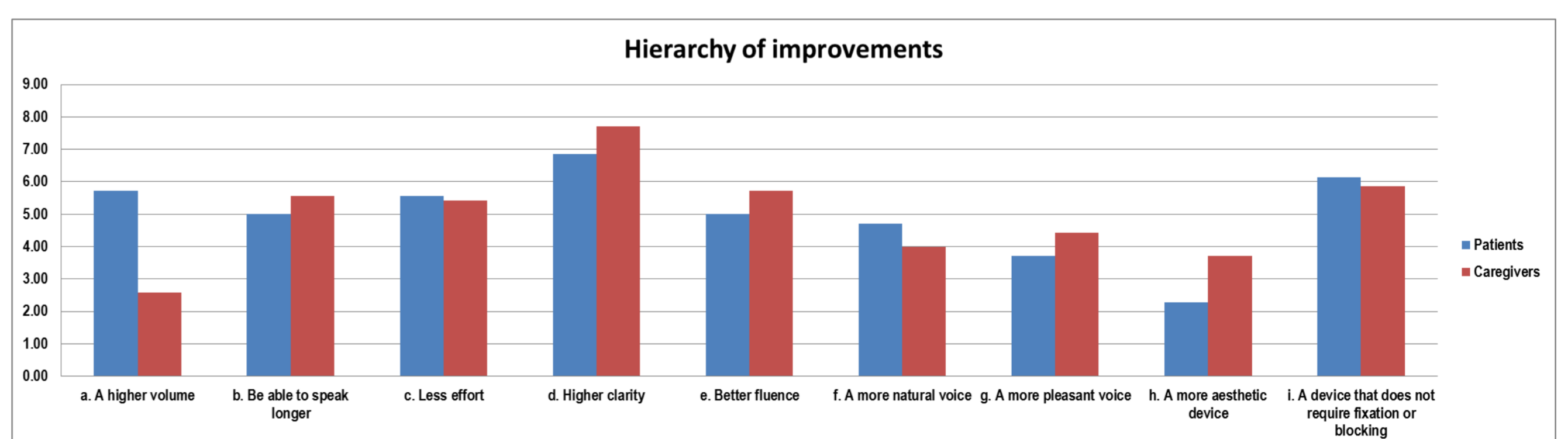
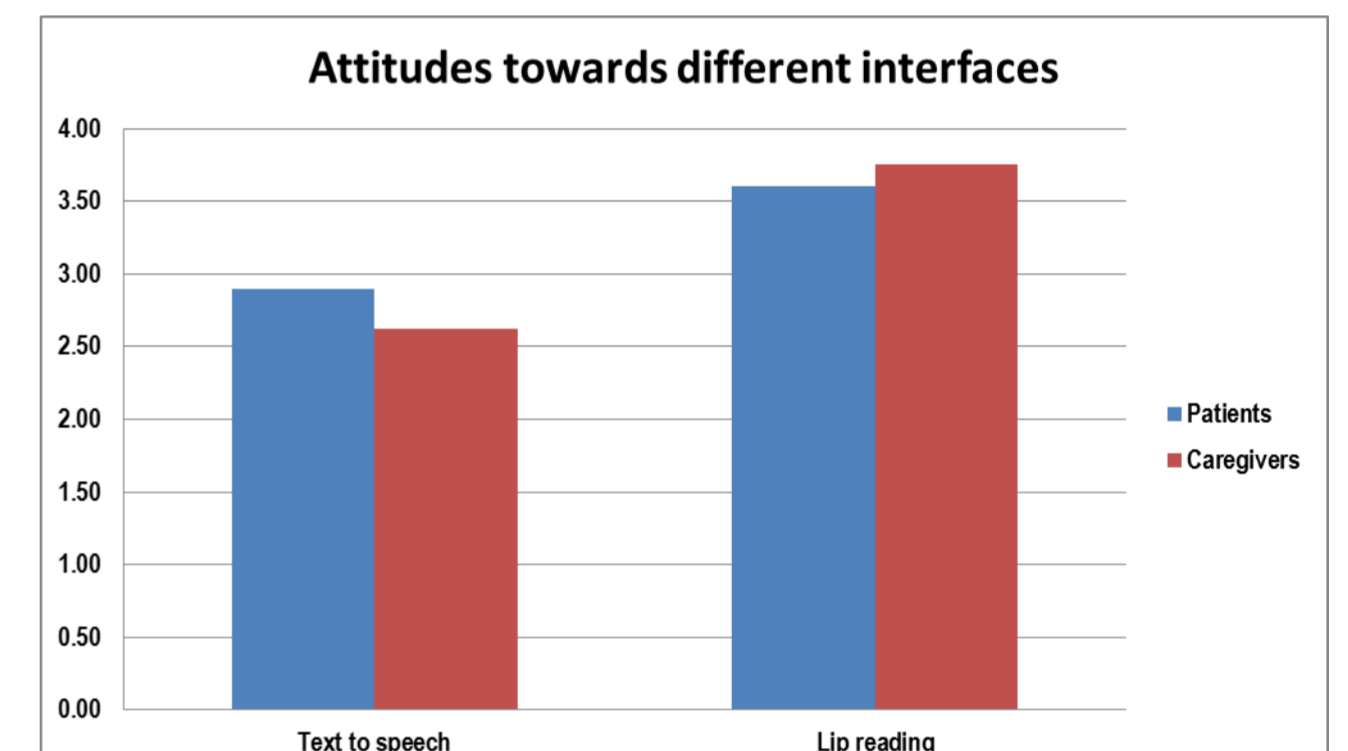
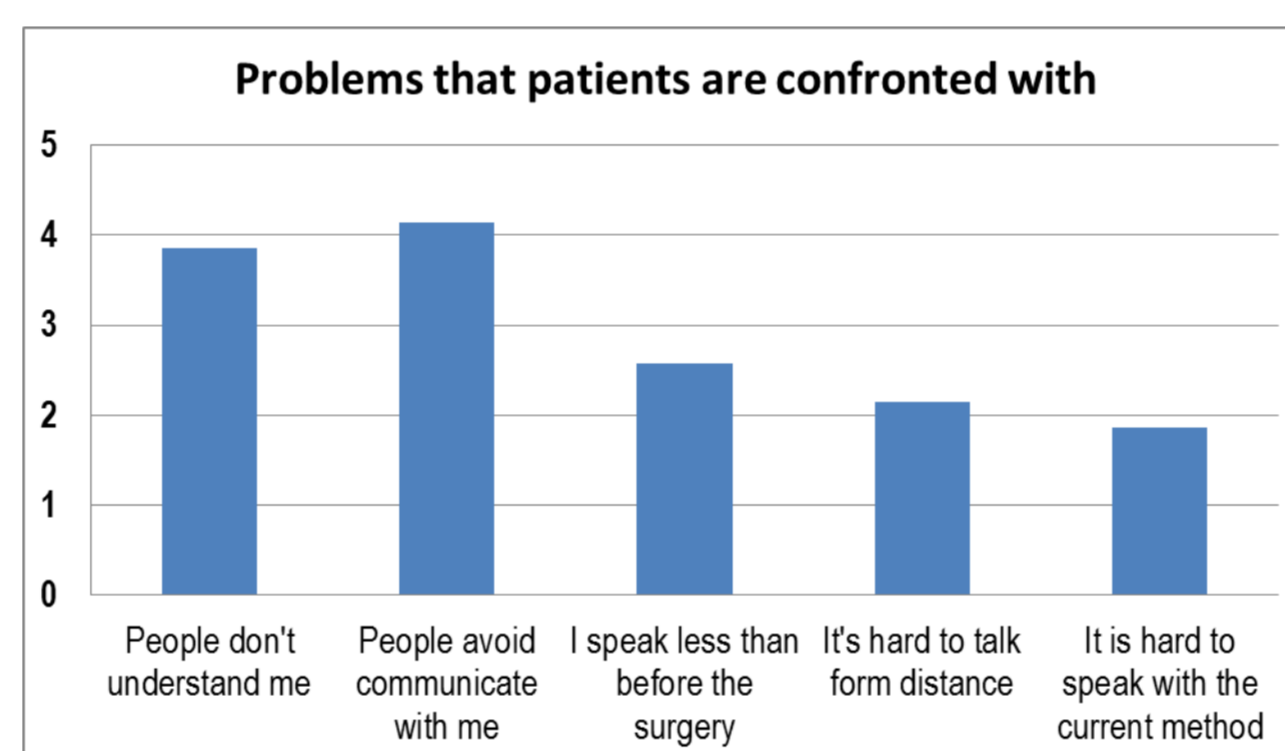
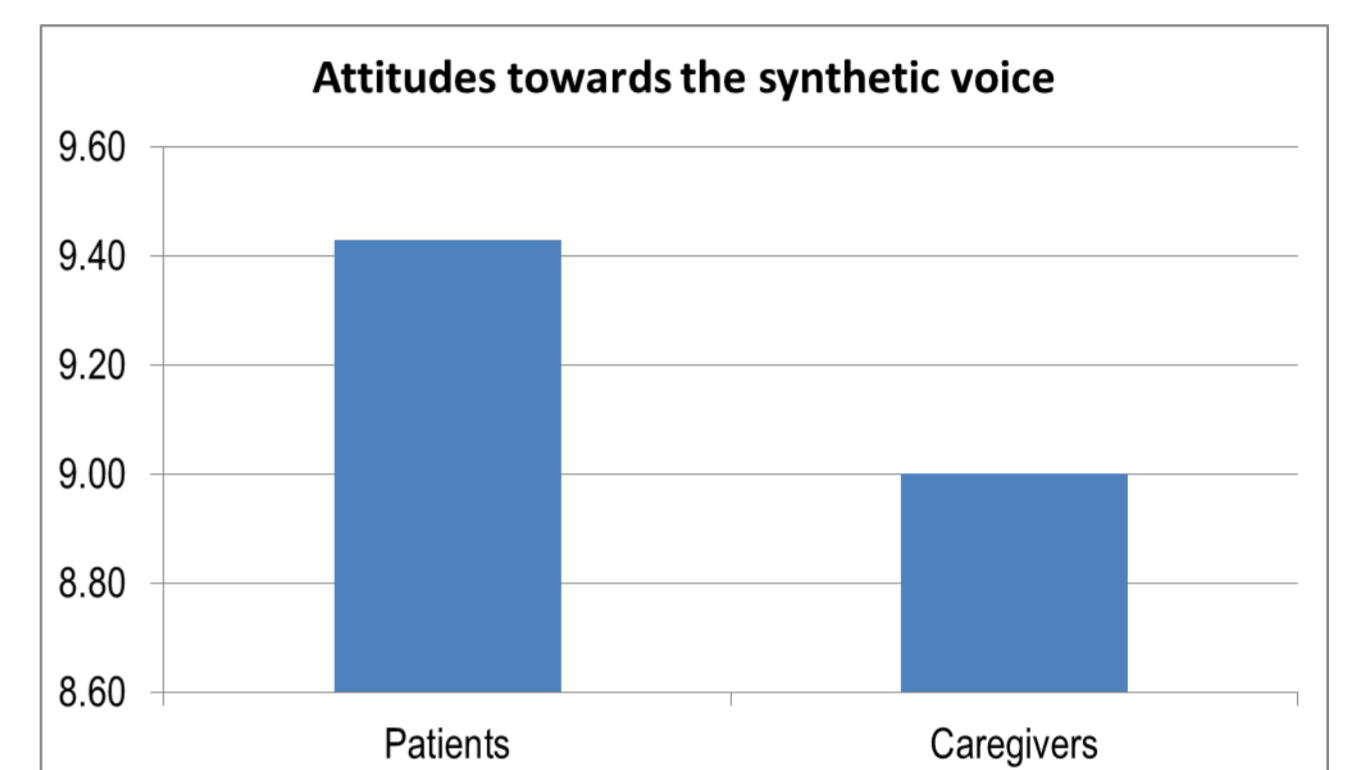
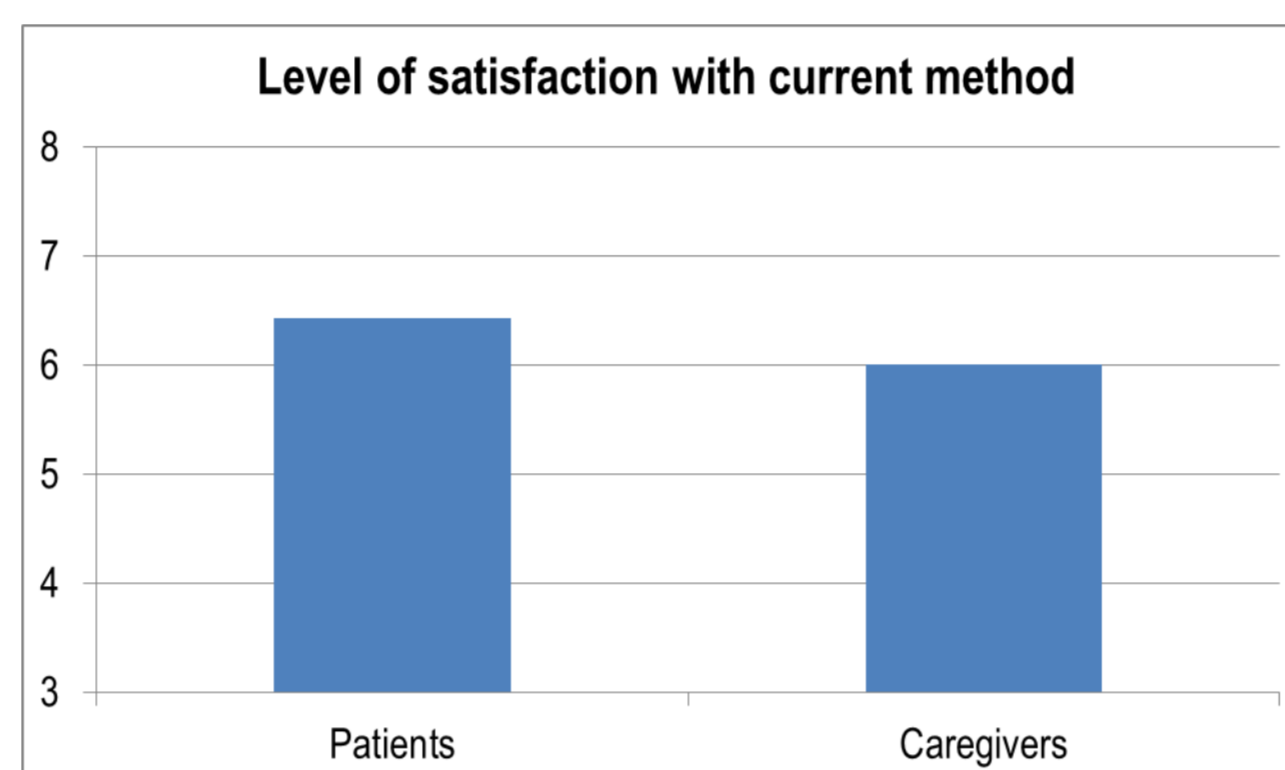
## Methods:

We used both qualitative (in-depth interviews, focus-groups) and quantitative methods (online surveys) to achieve the goal of our investigation.

Thirty six respondents (patients and caregivers) participated to individual or group discussions or filled the online survey

### Acknowledgement

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## Results

Results pointed that both patients and caregivers are generally satisfied with vocal assistive methods they currently use. In terms of improvements that should be addressed by future assistive methods, the patients reported that the most important functionalities they are expecting are: a clearer voice, a device that does not require fixation or closing a valve, a higher speaking volume, an assistive method that requires less effort when speaking.