

# Speed up the Recovery Time of Swallowing Function of Patients after Partial Laryngectomy

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**Abstract: Objective:** To explore the practice effect of Quality Control Circle (QCC) on shortening the recovery time of swallowing function after partial laryngectomy. **Methods:** Set up a QCC group; select “Speed up the recovery time of swallowing function of patients after partial laryngectomy” as the topic; select a total of 36 patients with laryngeal cancer after partial laryngectomy in our ward from May 2019 (before activity) to July 2019 (after activity); investigate the time consuming of swallowing function training in laryngeal cancer patients after partial laryngectomy using theories and tools of QCC; analyze the influencing factors, then develop and implement the corresponding countermeasures; compare the time consumption of swallowing function recovery before and after activity. **Results:** After the QCC activity, the recovery time of swallowing function was reduced from 105 hours to 50 hours, achieving the expected goal. **Conclusions:** QCC activities can promote the recovery of swallowing function after partial laryngectomy, shorten the length of stay, improve patients’ recovery confidence and reduce the workload of nurses, thus create a healthy, positive and excellent working environment for the nursing staff.

**Keywords:** Larynx; Partial resection; Swallowing function; Recovery time

**DOI:** <https://doi.org/10.12346/jnp.v2i1.6274>

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## 1. Introduction

In clinical nursing operation, there are many factors that affect the recovery time of swallowing function of patients after partial laryngectomy, and the non-standard swallowing instruction is the most direct factor, which may prolong the length of stay, reduce the postoperative comfort, and even cause doctor-patient disputes<sup>[1]</sup>. It has been reported that Quality Control Circle is of great significance to improve the quality of nursing work. In order to improve patients’ satisfaction with the recovery of swallowing function after partial laryngectomy<sup>[2]</sup>, the QCC activity with the topic of “speed up the recovery time of swallowing function of patients after partial laryngectomy” was carried out in our ward. The report is as follows.

## 2. Literature Review

1) The introduction of new techniques such as WeChat video and micro-classes, makes it easier for patients and

their families to acquire disease-related rehabilitation knowledge after laryngectomy. (Lu yue, Li li, et al.)

2) The implementation of health education path evaluation form provides systematic, dynamic, continuous and standardized health knowledge education and skill guidance for laryngeal cancer patients. It has effectively stimulated the initiative and dynamic role of nurses, and improved patients’ active participation and cooperation with treatment and nursing. In addition, patients’ satisfaction with nursing work, knowledge rate of health education content and follow-up compliance after discharge were enhanced. (Zuo hongxia, et al.)

## 3. Project Plan

In order to ensure the well progress of the activity, under the leadership of the instructor Xu Wei and the circle chief Kuang Junwei, the circle members Yu Qin, Mo Muqiong, Sun Yulin and Wang Jiamin, etc., adopted the principle of 5W1H, namely WHO, WHEN, WHERE,

WHY and HOW, to draw up the gantt chart of the project plan. Based on the investigation results, according to Plato's 80/20 law, two major reasons (79%) were determined to be "non-standard swallowing instruction" and "patients fail to master swallowing training methods". Therefore, these two problems were taken as the focus of this activity. Through the discussion and analysis of the group members, the real causes of non-standard swallowing instruction were summarized as follows: lack of standardized swallowing function training instruction by nurses, lack of evaluation of patients' mastery of swallowing method, improper choice of food, and single form of education<sup>[3]</sup>. The circle members chose tasks freely according to their own working ability, followed PDCA management methods of the quality control circle (Plan, Do, Check, and Action) and took corresponding countermeasures to solve the above main problems according to the project plan.

#### 4. Project Implementation

Countermeasures were developed and implemented as follows:

1) Establish the instruction process of swallowing function: Standardize the intravenous infusion process, and taught by senior nurses, to make sure everyone can reach the standard<sup>[4]</sup>.

2) All staff receive swallowing function training: Organize nurses of the whole department to study the related system, and teach the junior nurses emphatically, to give patients early access to comprehensive and standardized swallowing rehabilitation nursing guidance. It can improve the swallowing function of patients through effective breath-swallowing training, tongue muscle training, cough training, feeding training and so on, promote the improvement of swallowing and increase of food intake, improve the nutritional status of the body and relieve their bad mood at the same time. Thus, the length of stay was shortened and the patients' quality of life was improved.

3) Set up swallowing function training evaluation form: Standard evaluation form was used to provide accurate information for clinical nurses in assessing patients with swallowing disorders. To evaluate the progress of patients' swallowing function recovery, predict the possible problems and determine the nursing priorities according to the evaluation results<sup>[5]</sup>. Early intervention should be carried out for patients with problems of swallowing training, and effective preventive measures should be taken as soon as possible to minimize the recovery time of swallowing function and promote patients to recover as

soon as possible.

4) Apply specialty food: Choose the proper food and drink according to the instruction of the paste-swallowing test. Coagulation powder is a food thickener specially designed for patients with dysphagia. It was widely used in the swallowing function training to reduce the risk of infection by aspiration<sup>[6]</sup>.

5) Establish video teaching mechanism: According to the different educational level and understanding ability of patients, personalized education was carried out, and standard video demonstration was cited to visualize the training mode of patients. The contents included educations of feeding safety (for family members, patients and nursing workers), coagulation powder preparation standard, food and water intake, feeding skills (posture, body position, slow feeding in small bites on the unaffected side, etc.) and treatment scheme of sudden asphyxia or other unexpected events<sup>[7]</sup>.

#### 5. Project Evaluation Outcomes

Effects confirmation: After the implementation and improvement of countermeasures, bedside examination was carried out on the patients who underwent swallowing function training in our department in July 2019, in the same way as before the activity. According to the examination results, it took an average of 50 hours for the recovery of swallowing function after activity. Patients' satisfaction with swallowing function training and recovery was increased.

#### 6. Discussion

The QCC activity can effectively speed up the recovery time of patients' swallowing function after partial laryngectomy in our ward. Our ward carried out this QCC activity, and the scoring of circle ability was relatively conservative<sup>[8]</sup>. Although the goal of improvement has been achieved, the relevant nursing process still needs to be improved, and measures should be further consolidated. Regular trainings and assessments should be conducted for new recruits and interns to ensure the quality of measures<sup>[9]</sup>.

#### 7. Conclusions

Quality Control Circle is an edge tool to improve the quality of nursing work. Through the implementation of this activity, circle members can actively participate in the nursing quality management of the department, take the initiative to seek and discover problems, and use the QCC approaches to solve the problems encountered in nursing work. Finally, it has improved the quality of nursing work, and created a healthy workplace together.

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