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Commentary

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Develop Infographics with all Stakeholders on Board

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Health information is a key health management strategy to support patients and family caregivers at home. However, patients often find the health information incomprehensible, which leaves them anxious, and information overloaded [1]. Therefore, validity and usability of most pictorial educational handouts that health providers distribute is concerning. The research to date has tended to focus on the content or validity of health information rather than information presentation, information delivery, and handout usability in a target population. This is because our current practice of developing educational handout is led primarily by clinicians with little participation from patients. The challenges that require solving are (1) Inadequate patient engagement in handout development and (2) Lack of structured evaluation measurement to guide its development process. We aim to address these challenges by preliminarily testing an evidence-based handout development protocol.

Evidence-Based Infographics Development Protocol

We designed a 3-stage (development, iterative revising with multidisciplinary panel and field-testing stages) participatory action study to develop and validate a pictographic handout on tracheostomy care. Instead of combining the content validity and usability testing in one stage, we believe it is not ethical to share infographics before reaching content validity due to pictographs' high risk of introducing confusion to the patient. Therefore, in collaboration with all stakeholders on the board, we first reviewed the handout with an interdisciplinary expert panel to assure content validity and then a patient and family caregiver panel to field-test its usability.

Invited Experts Represent Full Spectrum of Expertise

The selection of multidisciplinary experts should be guided not only by their experience on the information content, but also their areas of expertise. In addition to the clinical experts on tracheostomy care, a health psychologist and graphic artist were also invited to join the multidisciplinary expert panel. Feedback from the graphic artist is essential to the overall presentation of the pictorial validity. For instance, our graphic expert suggested that multiple typefaces should be used to improve clarity and legibility. The health psychologist assessed whether the pictographic content was too overwhelming or confusing for patients or family caregivers to practice independently at home. Figure 1 illustrates the unique comments from each panel on improving the infographics on tracheostomy care.

Perceived Infographics Usability Measurement (PIUM)

To structure the revising stage, a PIUM was developed to consistently quantify experts' feedback and judgment. We reviewed literature on pictorial education and found six measurement constructs, which encompass consistency with clinical practice, handout's usefulness, overall informativeness, comprehensibility of pictographs and captions, layout simplicity, and pictographs' risk of introducing confusion [2]. Based on the theory of content validity, content with below 78% agreement scores on each measurement construct is considered non-valid [3]. In our study, the revising stage was repeated until the PIUM reached 78% on each measurement construct.

In conclusion, the evidence-based handout development protocol on tracheostomy care showed preliminary efficacy

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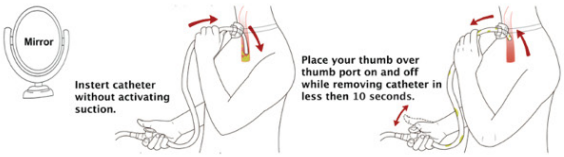
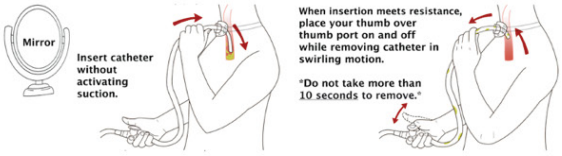
Step 4 of "How to suction your trach at home" Handout		Comments from Review Panels
Version 1	**Step 4:** Insert tube without suction. Within 10 seconds, remove tube while tapping suction hole several times. 	• "Without suction" is not a clear instruction. • Need to label the mirror. • Use nomenclature for inner cannula, tube could be confused with tracheostomy tube. • First, the proper term is "thumb port", we do not usually call it "suction hole". Second, you don't have to tap the suction hole at the wrong time or not at the right speed, the secretions could fall back into the airway. Consider revising. ----- *Multidisciplinary Expert Panel*
Version 2	**Step 4:** Sit in front of mirror. DO NOT leave catheter in trach for more than **10 seconds**. 	• "Intermittently" might be above the reading level, consider revising. • Do not use colored font/ capitalized, which could be harder to read for some people, instead use bold. • Need to add the 3mL lavage saline tube here in the suction step. ----- *Multidisciplinary Expert Panel*
Version 3	**Step 4:** Sit in front of mirror. Use 3mL saline tubes as needed. DO NOT leave catheter in trach for more than **10 seconds**. 	• Need to add the reason for using 3mL lavage saline. Patients do not need to use it every time. • For simplicity, probably do not need to repeat the less than 10 seconds twice here. • Use different typeface for legibility and clarity. ----- *Multidisciplinary Expert Panel*
Version 4	**Step 4:** Sit in front of mirror. Use 3mL saline tubes to help loosen secretions if needed. Inserting catheter will trigger a gag response. This is normal. 	• It is important to prepare the patient and let them know this is normal and do not be scared. • When do I know when to pull back the catheter? • Please add the swirling motion. • Please add how the 3mL saline can help, for example, use "to help with dryness and loosen secretions". ----- *Patient and Family Caregivers' Panel*

Figure 1: Experts' comments to guide the iterative revising process.

on establishing infographics' validity and usability in the target population.

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References

1. Chae J, Lee CJ, Jensen JD (2016) Correlates of cancer information overload: Focusing on individual ability and motivation. Health Communication 31: 626-634.
2. Wang T, Voss JG (2020) Effectiveness of pictographs in improving patient education outcomes: A systematic review. Health Education Research 36: 9-40.
3. Almanasreh E, Moles R, Chen TF (2019) Evaluation of methods used for estimating content validity. Res Social Adm Pharm 15: 214-221.

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