



Association Between Quality of Life Questionnaires: Towards Laryngology PROM Reduction

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Introduction

Outcomes in laryngology focus more on validated patient reported outcome measures (PROMs) than objective or other subjective results. The most recent PROM, the Laryngopharyngeal Universal Measure of Perceived Sensation (LUMP), evaluates globus severity.

The sheer volume of questionnaires administered increases the risk of survey fatigue and response inaccuracy. An aspirational goal of this group is **PROM de-escalation**, to decrease the overall number of questions required to depict patients' symptoms accurately. This study is an important first stage in a series of steps working towards overall laryngology PROM reduction.

Table 1: Average score for common Laryngology Patient Reported Outcomes Measures (PROMs)

PROM (Abbreviation)	Average summed score (SD)
Voice Handicap Index-10 (VHI-10)	14.5 (12.0)
Reflux Symptom Index (RSI)	15.3 (11.0)
Cough Severity Index (CSI)	8.05 (11.5)
Dyspnea Index (DI)	9.1 (11.6)
Eating Assessment Tool-10 (EAT-10)	8.01 (10.5)
Laryngopharyngeal Universal Measure of Perceived Sensation (LUMP)	8.46 (8.5)

Table 2. Comparison of LUMP vs Other Laryngology PROMs

	Intraclass correlation coefficient
RSI vs LUMP	0.64
EAT-10 vs LUMP	0.55
DI vs LUMP	0.50
CSI vs LUMP	0.48
VHI-10 vs LUMP	0.34

Research Questions

What is the relationship between LUMP and other laryngology PROMs? Are there specific individual questions from these instruments which can serve as a proxy for the LUMP?

Table 3. Expert clinical consensus top 5 clinically relevant statements from PROMs with 3 highest ICC's

Item (PROM)	Individual statement	Percent selection by consensus group
8 (RSI)	Sensation of something sticking in your throat or a lump in your throat	100%
2 (RSI)	Clearing your throat	82%
3 (RSI)	Excess throat mucus	82%
9 (RSI)	Heartburn, chest pain, indigestion, or stomach acid coming up	64%
4 (RSI)	Difficulty swallowing food, liquids or pills	36%

Materials and Methods

- 529 patients evaluated at the UCSF Voice and Swallowing Center prospectively completed PROMs from Sept-Dec 2019
- Data collected:
 - Age
 - Gender
 - PROMs
- Statistical analyses
 - Bland Altman plots to assess agreement between scores
 - Assessment of intraclass correlation coefficients

Table 4. Combinations of clinically relevant potential proxy questions, as compared to LUMP

Proxy question combinations	ICC
8	0.29
8+2	0.38
8+3	0.4
8+2+3	0.43
8+2+3+9	0.46
8+2+3+9+4	0.53

Results

- 480 patients with analyzable responses
 - Average age: 57 ± 17 years
 - 259 F: 221 M
- Average laryngology PROM summed score are shown in Table 1.
- RSI, EAT-10, and DI had the highest correlation with LUMP (Table 2)
- Clinical consensus by expert panel (4 laryngologist + 7 SLPs) identified 5 most clinically relevant statements from 3 PROMs with highest ICCs (Table 3)
- Additive effect of these 5 statements showed trend towards similar correlation with LUMP, as compared to RSI (Table 4)

Conclusions

1. **RSI may be a reasonable proxy for LUMP questionnaire in assessment of globus during routine clinical care.**
 - **LUMP is strongly advocated for high-quality clinical research.**
 - Further study is required to determine whether selected clinically-relevant items may function as adequate LUMP proxy.
2. Other laryngology PROMs should be scrutinized to determine where and how they may be decreased in size or necessity.
3. Future goal is to identify selected questions from each laryngology PROM which may still accurately portray patients' symptoms while decreasing survey burden.

References

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