

# The Impact of Video Nasal Endoscopy on Patient Satisfaction

## INTRODUCTION

- Advances in technology have made video endoscopy more accessible allowing for increased physician-patient interaction.
- These systems still have considerable expense for clinics
- Greater activation of patients, the process of providing patients with knowledge, skills, and emotional commitment to care,<sup>1</sup> is associated with improved physician-patient communication<sup>2</sup> and patient satisfaction.<sup>3</sup>
- In this study, we seek to prospectively evaluate the benefit of video endoscopy vs standard endoscopy on patient satisfaction.

## METHODS

- A prospective, randomized, single-blinded study was performed on new patients receiving care in the rhinology clinics of a tertiary-care center
- Patients were randomized into the standard endoscopic examination (SEE) or video endoscopic examination (VEE) groups (Figure 1).
- All patients were asked to complete the 22-item Sino-Nasal Outcome Test (SNOT-22) and the 18-item Patient Satisfaction Questionnaire Short-Form (PSQ-18).
- Statistical analysis was performed to identify differences between cohorts.

## RESULTS

- A total of 50 patients were recruited for the study with 25 patients placed in each trial arm.
- There was no significant difference in gender (p = 0.382) or age (p = 0.130) between groups.
- The SEE group had a mean total SNOT-22 score of 47.9 compared to the VEE mean total score of 45.7 (p = 0.694). There were no differences between subdomains (Table 1).
- Between the 7 subdomains of the PSQ-18, general satisfaction (p = 0.048) and communication (p = 0.028) were found to be significantly better in the VEE group. No other domains were significantly different (p>0.05) (Table 2)

## DISCUSSION

- VEE patients were noted to have significantly higher scores on the general satisfaction and communication domains of the PSQ-18 than SEE patients.
- Video endoscopy offers physicians space from patients' face, mimic surgical movements, and obtain photo-documentation. Its drawbacks include expense, the space the system occupies, and a possibly less-sharp, digitally recreated image.
- When patients cannot see their exam, the relationship between physician and patient becomes somewhat paternalistic, further challenging the move toward high-quality care as recognized by the Institute of Medicine's call for joint decision making.<sup>4</sup>
- By playing back the endoscopic examination, patients with positive findings are able to visualize the reasons for their symptoms and benefits of interventions, while patients with negative findings can be reassured.
- Previous research has shown that increased patients' participation allows physicians to provide more information and better align patient-physician goals through increased dialogue and patient inquiry.<sup>5</sup> Importantly, increased patient engagement has been shown to have a positive impact on patient satisfaction and compliance.<sup>6-8</sup>

## CONCLUSION

- VEE is a valuable tool for otolaryngologists and patients. Further studies evaluating variance in patient compliance and symptomatology may provide further justification for its use.

**Figure 1: Standard endoscopic vs Video endoscopic examinations**



**Figure 1: Standard endoscopic examination (SEE) on the left. No video was used. The exam was subsequently explained to the patient. Video endoscopic examination (VEE) on the right. The exam was recorded and then played back to the patient with explanation of the findings.**

**Table 1: SNOT-20 subdomain mean scores with standard deviation**

	Rhinologic Symptoms	Extra-nasal Rhinologic Symptoms	Ear/Facial Symptoms	Psychological Dysfunction	Sleep Dysfunction
<b>Standard Endoscopy Evaluation</b>	13.8±5.1	7.2±3.7	10.2±5.6	12.9±8.9	11.5±7.3
<b>Video Endoscopy Evaluation</b>	15.5±6.1	7.2±4.1	7.6±4.7	12.1±7.1	12.7±7.2
<b>p Value</b>	0.294	1.00	0.082	0.740	0.561

**Table 1: SNOT-22 subdomain mean score demonstrate no significant difference between cohorts**

**Table 2: PSQ-18 subdomain mean scores with standard deviation**

	General Satisfaction	Technical Quality	Interpersonal Manner	Communication	Financial Aspects	Time Spent with Doctor	Accessibility and Convenience
<b>Standard Endoscopy Evaluation</b>	4.24±.69	4.34±.50	4.28±.61	4.32±.71	4.08±.91	3.9±.84	3.83±.83
<b>Video Endoscopy Evaluation</b>	4.58±.47	4.60±.44	4.58±.70	4.7±.46	3.92±1.04	4.18±.91	3.93±.78
<b>p Value</b>	0.048*	0.059	0.114	0.028*	0.565	0.265	0.663

**Table 2: PSQ-18 subdomain scores. General Satisfaction and Communication scores were significantly higher in the VEE group. Higher scores imply a more positive perception. (\* implies significant value)**

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