

Shared Medical Appointments: Balancing Efficiency With Patient Satisfaction and Outcomes

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In an effort to control costs and improve quality, the US health system is undergoing a transformational shift away from the traditional model of managing patient care.¹ This shift follows the Institute of Medicine's observation that our current healthcare system is not equipped to manage the chronically ill, given its focus on acute disruptions of health.² The Affordable Care Act, passed in 2010, is an attempt to refocus our system to a population management approach that will address the need for managing chronic conditions.³ In particular, Title III aims to improve quality through value-based purchasing strategies. Given this shift in patient management and reimbursement models, providers must reconsider how they deliver care in order to balance efficiency, cost, and quality at a time when there is increasing competition for healthcare dollars. The shared medical appointment (SMA) is one model of care that holds promise for achieving these goals.⁴

Although there is no standard model for the SMA, the basis is that each patient receives individual time with the provider in addition to participating in a group dynamic.⁴ The goal is to provide patients with the benefits of a traditional one-on-one appointment, while also providing, for example, patient education in a group setting. In small practice settings, the SMA may allow providers to see more patients in a time frame, while improving outcomes.

The results of recent studies of SMAs suggest that improved physiologic health, self-efficacy, and patient education and feasibility are positive outcomes.⁵⁻¹¹ These studies also found that patient management of chronic disease improved. With the move toward value-based purchasing, these outcomes are significant. Additionally, patient satisfaction with SMAs has been found to be high.⁵⁻⁸ The SMA appears to benefit populations whose chronic condition requires more education regarding their diagnosis, health status, and disease self-management; the argument can be made that these populations could see significant improvements in

ABSTRACT

The shared medical appointment (SMA) is one model of care that holds promise for achieving the goal of balancing efficiency, cost, and quality. The results of recent studies of SMAs suggest that improved physiologic health, self-efficacy, and patient education and feasibility emerge as positive outcomes. In order to discover the potential applicability of the SMA format to otolaryngology, a pilot nasal symptoms SMA (NSSMA) model was implemented. The NSSMA was piloted in a private otolaryngology practice serving a metropolitan area in the Mid-Atlantic region. The Wilcoxon Signed Rank test demonstrated a significant improvement in the SNOT-20 score ($T = -2.073$; $P = .019$). Descriptive analyses for patient satisfaction results indicate high levels of patient satisfaction with the NSSMA. Also, Wilcoxon Signed Rank test for posttest knowledge scores were significantly higher than pretest scores ($T = 1.667$; $P = .048$). For busy practices managing large panels, the SMA serves as an opportunity to balance cost and quality.

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Take-Away Points

- Shared medical appointments (SMAs) can help balance patient outcomes, satisfaction, and efficiency for large and small clinics.
- Patient group sessions, as part of an SMA, support patient learning about chronic condition management.
- SMAs can be an innovation in the management of chronic rhinosinusitis.

health and quality of life through the SMA model. At the same time, practices that care for these populations could see improved practice efficiency and decreased cost.

The majority of SMA research has focused on cardiac and diabetic patient populations. To our knowledge, there is no published work currently looking at the use of the SMA in adult otolaryngology—arguably an equally serious population to study. In order to discover the potential applicability of the SMA in otolaryngology, a pilot nasal symptoms SMA (NSSMA) model was implemented. Nasal symptoms were targeted due to their chronicity and cost of care.¹² Chronic rhinosinusitis results in over 18 million patient visits annually in the United States, and the direct cost of treatment is estimated to be between \$3 billion and \$5 billion, annually. Rhinosinusitis is gaining recognition as a chronic disease whose management needs to incorporate patient education to reduce costly exacerbations and complications.¹³

Pilot NSSMA

The NSSMA was piloted in a private otolaryngology practice serving a Mid-Atlantic metropolitan area; the total active patient panel is 24,620. The pilot NSSMA was offered 1 day per week for 6 weeks. Patients were asked to participate in the NSSMA if their chief complaint focused on nasal symptoms, such as congestion, allergic rhinitis, sinusitis, or obstruction. To schedule the first several appointments, patients spoke to the nurse practitioner (NP) who explained the NSSMA concept. For the final NSSMA, patients were scheduled by the regular appointment secretary.

These participants completed standardized forms during each NSSMA. The first questionnaire, the nasal symptom knowledge test, was designed by an NP to assess participants' knowledge of rhinosinusitis and allergic rhinitis; this measure consists of 5 true/false questions. The second measure, the sino-nasal outcome test (SNOT-20), is a validated tool for assessing quality of life in patients with rhinosinusitis.¹⁴ The final questionnaire was a patient satisfaction survey. The survey was modeled after the Harvard Vanguard Medical Associates tool for evaluation of the SMA for children with asthma and their caregivers.

The NSSMA started with a group introduction to the

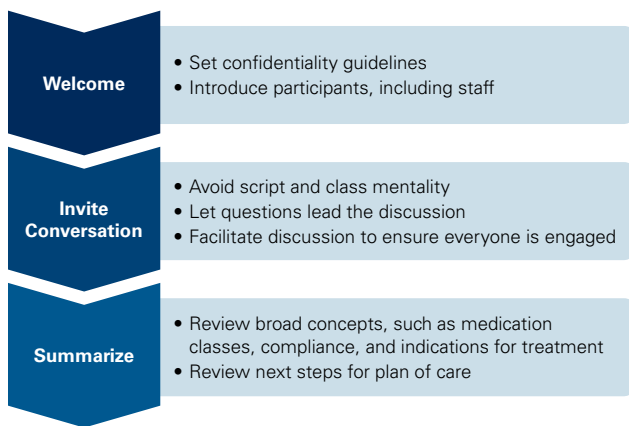
process. During this time, a confidentiality agreement was reviewed and standardized forms were completed, including the SNOT-20, the nasal symptoms knowledge assessment, and the nasal symptoms chart. Two nurses circulated to assist with completing forms and obtain vital signs. The participants were given 20 minutes to complete forms, have healthy refreshments, and talk among themselves. The NP acted as the facilitator, circulating and taking the histories of present illness. The **Figure** indicates the flow of the NSSMA.

The next phase of the NSSMA was the individual physical exam portion; the physician joined the group at this juncture. The focused ear, nose and throat exams occurred in the group setting conducted by the NP and physician. Participants were given the option of having their focused ENT exam in the open room or in a private exam room; none of the participants opted for the exam room. The providers met face-to-face with each participant while the other group members ate healthy refreshments and finalized forms. Once the individual exams were complete, the physician began nasal endoscopy. The endoscopy took place in the group room and was projected so that all patients could watch and listen. This portion of the visit was interactive, and the physician and the NP facilitated the conversations in an organic manner based on the participants' exam findings and the questions that arose during the conversation; therefore, no discussion guide was used.

General themes arose from the conversation around the commonality of nasal symptoms, including medical versus surgical treatments options. Medical management conversations reviewed environmental controls for allergy management, medication compliance, indications for antibiotics, and the role of intradermal allergy skin testing. During the conclusion, the physician summarized general findings and invited more questions. The NP circulated, reviewing individual care plans and ensuring that the patients understood their plan of care.

At the time of the pilot, CMS did not specify office visit coding for group ambulatory visits. However, the SMA meets the billing criteria for traditional evaluation and management coding, so we billed patients individually based on level of service for their unique treatment plan. Internally, the practice created a code for the SMA in their electronic health record so they could be tracked. The internal code appears on the office note, which is available to payers in case of an audit or billing dispute. In the NSSMA pilot, the clinic accommodated 3 to 9 new patients in a 90-minute time interval. In a typical office

■ **Figure.** NSSMA Flow and Components



NSSMA indicates nasal symptoms shared medical appointment.

day, the clinic would conduct 4 new patient appointments during the course of 90 minutes. Staffing and overhead costs were the same; therefore, in this pilot, increased revenue was generated.

Methods and Results

To be included in the NSSMA pilot, patients had to meet inclusion criteria: adult (≥18 years old) and their chief complaint focused on nasal symptoms. Formal diagnoses were made during the NSSMA and were not inclusion criteria. Fifteen of the 17 NSSMA patients were new patients to the practice and scheduled their initial visit as a NSSMA rather than a traditional appointment. The remaining 2 patients were follow-up patients: one sought evaluation for nasal symptoms as a new complaint and the other patient participated 1 month after having sinus balloon dilation. Approximately 90 patients were asked to participate, with the primary reasons for refusing being unavailability for an appointment on the days the SMA was being offered. SMAs were offered 1 day per week over the 6-week period, with some weeks having no patients scheduled. The range of participants per SMA was 3 to 9 and was the result of patient schedules with no set maximum.

Demographically, 4 patients identified as African American, 12 as Caucasian, and the remainder as Hispanic. Eleven patients were female (65%) and 6 were male (35%). The mean age of participants was 47.52 years, with a standard deviation (SD) of 15.9. Ten (58.8%) carried a primary *International Classification of Diseases, Ninth Revision, Clinical Modification* code for sinusitis, 7 (41.2%) for allergic rhinitis; 5 patients (29%) carried both diagnoses. The most common comorbidity was deviated nasal sep-

tum (41%). Of the 17 participants, 9 patients completed questionnaires for the initial NSSMA and follow-up visit. Eight patients completed only initial session measures and did not return to the practice for follow-up care.

The mean SNOT-20 score for all 17 NSSMA participants was 1.72 (range = 0.5-3.45; SD = 1.14). Of the 9 patients who completed both pre- and post measures, the mean for the preintervention SNOT-20 score was 1.83 (range = 0.5-3.12; SD = 1.12), while the mean for the postintervention SNOT-20 score was 1.06 (range = 0.1-3.25; SD = 1.19). The Wilcoxon Signed Rank test demonstrated a significant improvement in the SNOT-20 score ($T = -2.073; P = .019$).

The preintervention mean score for the knowledge test for all 17 NSSMA participants was 0.47 (range = 0.2-0.8; SD = 0.17). Of the 9 participants who completed both pre- and posttesting, the mean for the preintervention knowledge test was 0.54 (range = 0.2-0.8; SD = 0.2), while the mean score for the postintervention test was 0.58 (range = 0.4-0.8; SD = 0.16). The Wilcoxon Signed Rank test showed posttest knowledge scores significantly higher than the pretest scores ($T = 1.667; P = .048$).

Descriptive analyses indicates high levels of patient satisfaction with the NSSMA. Question 1: 53% of patients reported that they heard answers to questions that they did not think to ask. Question 2: 88% reported that they were comfortable with the handling of privacy. Question 3: 76% reported that they would schedule an SMA in the future. Question 4: When asked if they would have preferred their appointment be an individual visit, 53% said no. Question 5: 71% reported that they would recommend a SMA to friends and family (Table).

These results indicate the majority of patients were satisfied and quality-of-life measures trended toward improvement. The patients also appeared to have learned during their experience, as their knowledge assessment scores improved. Given its acceptability, impact on both

■ **Table.** Patient Satisfaction Survey Results, N = 17

	Yes	No	Not Sure
Did you hear answers to questions you did not think to ask?	9 (53%)	6 (35%)	2 (12%)
Were you comfortable with the handling of confidentiality and privacy?	15 (88%)	2 (12%)	0 (0%)
Would you schedule a shared appointment again?	13 (76%)	2 (12%)	2 (12%)
Would you have preferred today's visit to have been an individual visit?	4 (24%)	9 (53%)	4 (24%)
Would you recommend a shared appointment to your friends/family?	12 (71%)	2 (12%)	3 (18%)

quality of life and education, as well as the increased clinic efficiency, otolaryngology practices could realize similar benefits by piloting SMA programs.

Challenges to the NSSMA

Although the rate of return for the follow-up appointment was in keeping with norms for ENT referrals at this clinic, the NSSMA had several practical challenges. The first was scheduling: the appointments with the lowest no-shows were those scheduled after the NP explained the NSSMA to the patient. The final NSSMA was scheduled by the appointment secretary and the no-show rate was higher, with 1 patient reportedly not realizing they were scheduled for an SMA. Staff buy-in is recognized by many published works and this pilot as essential for the success of SMA.

A challenge also existed with the automated appointment reminder system. The NSSMA had an allotted 90-minute block in the schedule; however, individual patients were listed at separate times during that block, which prompted the automated service to remind patients of the incorrect start time. Similar barriers were identified in a study by Johnson and Raterink when implementing a diabetes clinic within their family practice program.¹⁵

A third challenge involved physical space. A conference room served as space for the appointments; however, when this room was not available, the flow of the NSSMA was negatively affected. The shift in location caused problems with scheduling, as well. The highest-volume week day was no longer a feasible day to offer the NSSMA, making it less likely to reach capacity.

Conclusions

The SMA provides an opportunity for efficient health-care delivery that maintains or increases quality and patient satisfaction. Patient-centered care requires that providers give patients timely access to care and a choice about services rendered—the SMA allows for both. Examples of potential opportunities for SMA include global charge visits, transitional care appointments, extended teaching opportunities, and visits that include caregiver support.

Global charge visits are not directly reimbursed, as the fee is included in the physician's surgical fee; postoperative SMA would free up time for reimbursable appointments. Transitional care is also challenging due to the time constraints placed by CMS; the SMA would allow multiple patients to be evaluated simultaneously, while fostering a sense of patient community. For busy practices managing large panels, the SMA serves as an opportunity to balance cost and quality.

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