

Physician perceptions of the treatment and management of allergic and nonallergic rhinitis

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ABSTRACT

Historically, rhinitis has been perceived by many clinicians in respiratory medicine as an unimportant condition. The purpose of this study was to evaluate physicians' perceptions of the impact of allergic rhinitis and chronic or nonallergic rhinitis on patients' health. This cross-sectional survey involved U.S. physicians identified from a claims database as treating patients with allergic rhinitis or chronic rhinitis during a 13-month period. Responses were stratified by physicians' overall assessment of their patients' rhinitis severity, presence or absence of an allergy specialist at the practice, and agreement or disagreement that allergic rhinitis and nonallergic rhinitis should be managed similarly. Of 2614 physicians invited to participate, 766 responded. Physicians who perceived the majority of their patients as having moderate-to-severe symptoms were more likely to be prescribed more than one class of medication and physicians whose patients had mostly mild symptoms were more likely to recommend nonprescription products. Physicians whose practice included an allergy specialist compared with physicians without an allergy specialist at their practice were more likely to report that higher percentages of their patients were prescribed more than one class of medication, more likely to rate patients' descriptions of symptom severity and quality-of-life-related issues as extremely important in treatment decisions, and less likely to believe that allergic rhinitis and nonallergic rhinitis have the same symptoms. Physicians who did not agree that allergic rhinitis and nonallergic rhinitis should be managed similarly were more likely to prescribe more than one class of medication and to rate patients' descriptions of symptom severity and quality-of-life impact as extremely important in their treatment decisions. This physician survey provides insight into perceptions of the impact of allergic rhinitis and nonallergic rhinitis on patients' quality of life and symptom severity.

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Key words: Allergic rhinitis, allergy, inflammation, nonallergic rhinitis, physician survey, respiratory, respiratory medicine

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The burden of rhinitis on the community is considerable.¹ The complications of rhinitis include headache, sleep disturbance, fatigue, impaired cognitive function, and decreased productivity at work, each of which may adversely impact patients' quality of life.^{2–9} Rhinitis is also a risk factor for asthma. According to some recommendations, all patients with rhinitis should be evaluated for asthma, and the two conditions should be treated concurrently.^{10–12}

Rhinitis can be classified as allergic or nonallergic.^{2,5–7,13–15} Allergic rhinitis results from allergen exposure in sensitized individuals and may be seasonal or perennial depending on the presence of the relevant allergens.^{16,17} Nonallergic rhinitis is chronic nasal inflammation not caused by systemic IgE-dependent mechanisms.^{18,19} One common cause of nonallergic rhinitis is acute viral infection; other causes include hormonal changes, side effects of medication, chemical irritants, exercise, weather and temperature changes, and gastroesophageal reflux disease. Signs and symptoms alone do not differentiate allergic rhinitis and nonallergic rhinitis.¹⁸ Both allergic rhinitis and nonallergic rhinitis are manifested by nasal symptoms such as congestion and runny nose and ocular symptoms such as

tearing and itching. Allergic rhinitis is diagnosed based on testing the patient with known allergens. The diagnosis of nonallergic rhinitis is one of exclusion based on history, physical examination, and, in some cases, testing the patient with known allergens.¹⁸ Distinguishing between allergic rhinitis and nonallergic rhinitis may be difficult in clinical practice, and the presence of concomitant allergic rhinitis and nonallergic rhinitis in some patients confounds the diagnoses further.^{5,13}

Treatment options for allergic rhinitis include allergen avoidance, antihistamines, decongestants, cromolyn sodium, antileukotrienes, anticholinergic agents, intranasal corticosteroids, and immunotherapy.^{20–26} Treatment for nonallergic rhinitis is not as well defined as for allergic rhinitis.¹⁹ Surgical approaches to correct sinonasal abnormalities as well as pharmacotherapy with agents such as decongestant intranasal corticosteroids have been tried.

Historically, rhinitis has been perceived by many in the medical community as an unimportant condition rather than a substantive disease. However, recent data are beginning to increase awareness of the seriousness of rhinitis.^{2,5,14} The primary objective of this survey was to evaluate physicians' perceptions of the impact of rhinitis on their patients' quality of life and the burden or severity of patients' symptoms.

METHODS

Participants

Physicians identified in a medical claims database of a large U.S. health care plan as having treated patients aged ≥ 4 years with allergic rhinitis or chronic rhinitis during a 13-month period were invited to complete the survey. Patients were identified as having allergic rhinitis or chronic rhinitis if they had one International Classification of Diseases, version 9 (ICD-9) code, and a pharmacy claim for a rhinitis medication (antihistamine, nasal corticosteroid, or montelukast) or if they had two claims encounters with a rhinitis ICD-9 code during the study period. Patients were treated between January 1, 2004 and January 31, 2005 and were continuously enrolled in their health plan for 12 months before and after the index date (defined as the date of the earliest medical claim or the earliest pharmacy claim for rhinitis during this period). Physicians were excluded if they treated five or less patients with rhinitis during the study period or if they treated an average of less than five patients during allergy seasons (March to October) during the study period.

Study Design

This cross-sectional survey was conducted by i3 Innovus (Eden Prairie, MN). Participating physicians completed a one-time, 15-minute survey, *Physician Survey on the Burden of Allergic and Nonallergic Rhinitis*,

between October 12, 2006 and December 18, 2006. The survey was distributed by fax, with follow-up mailings to nonresponders, and comprised four sections: assessment of rhinitis, burden of rhinitis, treatment and medication, and physician/practice information. Participating physicians were compensated \$75 (to be paid to them or to an allergy-related charity) for completing and returning the survey.

Assessment measures were created based on physician responses to specific survey questions. The primary stratification variable was a categorical measure of perceived severity of the majority of rhinitis patients seen by physicians in the past 30 days. Secondary stratification variables included the presence of an allergy specialist at the physician's practice, the physician's agreement or disagreement with a statement that allergic rhinitis and nonallergic rhinitis should be treated and managed similarly, and whether or not the physicians themselves suffered from allergic rhinitis.

Statistical Analyses

Statistical analyses were performed with SAS version 9 (SAS Institute, Inc., Cary, NC). Univariate analyses were conducted for all physician survey variables, and bivariate statistical comparisons were performed between stratification variables and survey variables. Descriptive comparisons of patient claims variables were performed across three levels of perceived patient rhinitis severity (mild, moderate, and severe). Use of prescription medications was stratified by the presence of an allergy specialist at the practice. Statistical tests were performed as two-tailed tests; adjustments for multiple comparisons were not performed.

RESULTS

A total of 2614 physicians met the inclusion criteria and were invited to complete the survey. The survey response rate was 30% (766 surveys were returned, 13 partially completed surveys were excluded). Table 1 summarizes the characteristics of the participating physicians and the nonparticipating physicians. Table 2 summarizes the demographics of participating physicians. Most participating physicians were men and were specialists in allergy and immunology. In addition, most participants were 35–64 years old and nearly one-half had practiced medicine for ≥ 20 years. Over one-half of the participants reported having an allergy specialist at their practice and reported that they suffered from allergic rhinitis themselves. Respondents reported seeing an average of 27 patients daily and reported that, on average, 24% of patients treated in the past 30 days had seasonal allergic rhinitis only, 19% had perennial allergic rhinitis only, 26% had perennial allergic rhinitis with seasonal exacerbations, 13% had nonallergic rhinitis only, and 17% had mixed

Table 1 Characteristics of participating and nonparticipating physicians

	Participating Physicians (<i>n</i> = 766) <i>n</i> (%)	Nonparticipating Physicians (<i>n</i> = 1,848) <i>n</i> (%)	<i>p</i> Value
Sex			<0.0425
Men	642 (84)	1473 (80)	
Women	115 (15)	354 (19)	
Not stated	9 (1.2)	21 (1.1)	
Specialty			<0.0001
Allergy/immunology	317 (41)	532 (29)	
Family/general practice	195 (25)	592 (32)	
Ear/nose/throat	117 (15)	315 (17)	
Internal medicine	65 (8.5)	201 (11)	
Pediatrics	51 (6.7)	136 (7.4)	
Pulmonary	12 (1.6)	41 (2.2)	
Emergency medicine	3 (0.4)	8 (0.4)	
Dermatology	1 (0.1)	4 (0.2)	
Rheumatology	1 (0.1)	3 (0.2)	
Other	4 (0.5)	16 (0.9)	
U.S. region			<0.2047
South	395 (52)	983 (53)	
Midwest	226 (30)	572 (31)	
Northeast	75 (9.8)	138 (7.5)	
West	70 (9.1)	155 (8.4)	

Table 2 Demographic characteristics of participating physicians

Variables and Response	<i>n</i> (%)
Age (yr)	
25–34	11 (1.45)
35–44	186 (24.44)
45–54	291 (38.24)
55–64	214 (28.12)
65–74	55 (7.23)
≥75	4 (0.53)
Valid <i>n</i>	761
Years practicing medicine	
Fewer than 5 yr	10 (1.32)
5–9 yr	96 (12.63)
10–14 yr	134 (17.63)
15–19 yr	164 (21.58)
≥20 yr	356 (46.84)
Valid <i>n</i>	760
Have allergic rhinitis	
No	358 (47.17)
Yes	401 (52.83)
Valid <i>n</i>	759
Allergy specialist at practice	
No	324 (42.86)
Yes	432 (57.14)
Valid <i>n</i>	756

allergic rhinitis and nonallergic rhinitis. Physicians who reported that the largest proportion of their patients were mild sufferers were grouped in a category of “mild perceived severity”; those who reported the largest proportion as moderate sufferers were grouped in “moderate perceived severity”; and those physicians who reported the largest proportion of their patients to be severe sufferers were grouped in “severe perceived severity.” With regard to the majority of patients seen in the past 30 days, 61% of physicians characterized their rhinitis severity as “moderate,” 21% as “mild,” and 18% as “severe.”

Stratification by Physician-Perceived Severity of Rhinitis

Table 3 summarizes the results stratified by physicians' perceptions of the severity of their rhinitis patient population. An allergy specialist was more likely to be present at practices where physicians perceived their patients' rhinitis patients as severe, and more than one class of medication was somewhat more likely to be prescribed in these practices. A greater proportion of physicians treating patients with perceived severe and moderate rhinitis strongly agreed with the statement that medical treatment of rhinitis improves patient quality of life compared with mild rhinitis. Correspondingly, evaluations of patient quality of life were “almost always” performed in a greater percentage of practices with perceived severe rhinitis

Table 3 Survey findings stratified by physician-perceived severity of patients' rhinitis

	Physician-Perceived Severity			Total	<i>p</i> Value
	Mild	Moderate	Severe		
Allergy specialist at practice					
No, <i>n</i> (%)	115 (75)	173 (37)	33 (24)	321 (43)	<0.0001
Yes, <i>n</i> (%)	39 (25)	290 (63)	102 (76)	431 (57)	
Valid <i>n</i>	154	463	135	752	
Number of medications prescribed					
1 class (%)	39	30	29	32	<0.0001
>1 class (%)	52	64	66	62	
None prescribed (%)	8.5	5.6	5.2	6.1	0.0001
Valid <i>n</i>	157	466	137	760	
Questions regarding impact on quality of life					
Never/rarely, <i>n</i> (%)	13 (8.4)	27 (5.8)	10 (7.3)	50 (6.6)	0.0026
Sometimes/often, <i>n</i> (%)	108 (70)	289 (62)	68 (50)	465 (62)	
Almost always, <i>n</i> (%)	34 (22)	148 (32)	59 (43)	241 (32)	
Valid <i>n</i>	155	464	137	756	
Patient missing school or work					
Never/rarely, <i>n</i> (%)	67 (44)	162 (35)	33 (24)	262 (35)	0.0071
Sometimes, <i>n</i> (%)	70 (46)	238 (51)	77 (56)	385 (51)	
Often/very often, <i>n</i> (%)	16 (10)	65 (14)	27 (20)	108 (14)	
Valid <i>n</i>	153	465	137	755	
Patient's description of the severity of his/her symptoms in deciding how to treat					
Not at all to fairly important, <i>n</i> (%)	5 (3.2)	13 (2.8)	0 (0.00)	18 (2.4)	0.0093
Very important (%)	58 (37)	122 (26)	32 (23)	212 (28)	
Extremely important (%)	94 (60)	332 (71)	105 (77)	531 (70)	
Valid <i>n</i>	157	467	137	761	
Allergic rhinitis and nonallergic rhinitis should be treated and managed similarly					
Disagree (%)	54 (35)	252 (54)	78 (57)	384 (51)	0.0007
Neutral (%)	43 (28)	87 (19)	25 (18)	155 (20)	
Agree (%)	57 (37)	128 (27)	34 (25)	219 (29)	
Valid <i>n</i>	154	467	137	758	
Medical treatment of rhinitis improves patients' quality of life					
Agree (%)	64 (41)	106 (23)	38 (28)	208 (28)	<0.0001
Strongly agree (%)	92 (59)	358 (77)	97 (72)	547 (72)	
Valid <i>n</i>	156	464	135	755	

compared with mild or moderate rhinitis. More physicians in practices categorized in the perceived severe rhinitis group reported that patients missed school or work "often/very often" compared with physicians with patients considered to be in the mild or moderate groups.

Stratification by Presence or Absence of an Allergy Specialist

Physicians whose practices included an allergy specialist were more likely to be ≥ 55 years of age ($p < 0.0001$) and to have been practicing medicine for ≥ 20 years than those who did not have an allergy specialist in their group ($p = 0.0113$). Table 4 shows the survey results stratified by the presence or absence of an allergy specialist at the practice. The mean number of

patients with rhinitis treated during the past 30 days was greater in practices with a specialist (195 patients) than in practices without a specialist (92 patients). More patients with seasonal allergic rhinitis were seen in practices without an allergy specialist than in those with practices with a specialist and a slightly higher proportion of patients with perennial allergic rhinitis were seen in the practices with an allergy specialist.

According to physician ratings, significantly more patients treated in practices with an allergy specialist reported nasal congestion and associated mouth breathing compared with those treated in practices without a specialist. Physicians reported that rhinorrhea and pharyngeal symptoms were reported by a significantly higher proportion of patients treated in practices without an allergy specialist. No significant

Table 4 Survey findings stratified by presence or absence of allergy specialist at the practice

	Allergy Specialist At Practice		Total	<i>p</i> Value
	No	Yes		
Number of patients with allergic rhinitis and nonallergic rhinitis treated in past 30 days				
Mean number	92	195	150	<0.0001
Valid <i>n</i>	306	399	705	
Approximately what percentage of rhinitis patients treated in past 30 days suffered from				
Seasonal allergic rhinitis only	31%	19%	24%	<0.0001
Perennial allergic rhinitis only	18%	20%	19%	0.0027
Perennial allergic rhinitis with seasonal exacerbation(s)	23%	29%	26%	<0.0001
Nonallergic rhinitis only	12%	13%	13%	0.4511
Both allergic rhinitis and nonallergic rhinitis	15%	19%	17%	0.0003
Valid <i>n</i>	324	432	756	
For all allergic and nonallergic (chronic) rhinitis patients treated during past 30 days, what percentage were prescribed				
1 class of medication	38%	28%	32%	<0.0001
>1 class of medication	55%	67%	62%	<0.0001
No prescription medications	7.8%	4.9%	6.1%	<0.0001
Valid <i>n</i>	324	430	754	
Which symptoms bother patients most?				
Nasal congestion/associated mouth breathing	155 (48%)	254 (59%)	409 (54%)	0.0028
Rhinorrhea	161 (50%)	163 (38%)	324 (43%)	0.0010
Pharyngeal symptoms of sore throat, throat clearing, or itching of the palate and throat	93 (29%)	93 (22%)	186 (25%)	0.0234
The patient's description of the severity of his/her symptoms in deciding how to treat				
Not at all to fairly important	11 (3.4%)	7 (1.6%)	18 (2.4%)	0.0007
Very important	110 (34%)	100 (23%)	210 (28%)	
Extremely important	202 (63%)	325 (75%)	527 (70%)	
Valid <i>n</i>	323	432	755	
The patient's description of the impact of his/her symptoms on activities of daily living in deciding how to treat				
Not at all to fairly important	26 (8.1%)	28 (6.5%)	54 (7.2%)	0.0045
Very important	136 (42%)	137 (32%)	273 (36%)	
Extremely important	161 (50%)	267 (62%)	428 (57%)	
Valid <i>n</i>	323	432	755	

differences in the incidence of sleep problems or irritability were reported between patients treated in practices with or without an allergy specialist although a reduced ability to concentrate/make decisions was reported more frequently by patients treated in practices with a specialist ($p = 0.0006$).

Figure 1 shows that patients' descriptions of symptom severity were categorized as "extremely important" by a greater percentage of physicians in practices with an allergy specialist (75%) than in those without (63%, $p = 0.0007$); the patient's description of the impact of symptoms on daily activities was categorized as "extremely important" by 62% of physicians with ready access to an allergy specialist compared with 50% of those without such access ($p = 0.0045$).

A greater proportion of physicians with an allergy specialist at their practice disagreed with the statement that allergic rhinitis and nonallergic rhinitis present with the same symptoms (28%) and should be treated and managed similarly (59%) in comparison with physicians at practices with no specialist (20%, $p = 0.0205$ and 40%, $p < 0.0001$, respectively; Fig. 2).

Seventy-nine percent of physicians in practices with an allergy specialist strongly agreed that medical treatment of rhinitis improves patient quality of life and only 63% of physicians at practices with no specialist agreed with this statement ($p < 0.0001$). In addition, 65% of physicians working with an allergy specialist compared with 48% of their colleagues in practices with no specialist strongly agreed that there is a need

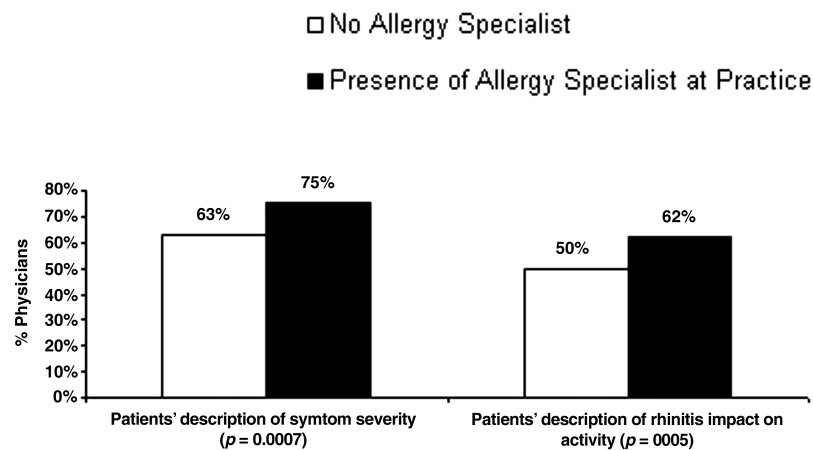


Figure 1. Physician ratings of patient descriptions as “extremely important” stratified by presence of allergy specialist at practice.

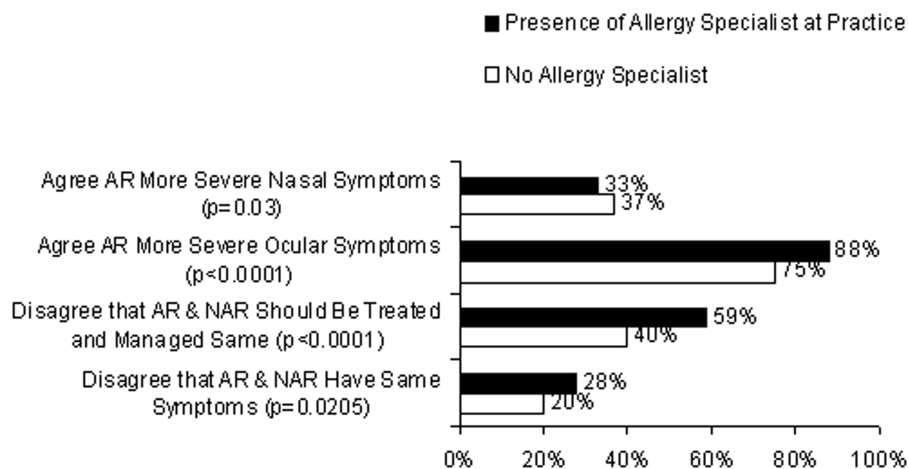


Figure 2. Physician opinions regarding allergic rhinitis and nonallergic rhinitis (percent who agree and disagree with statements) stratified by presence of allergy specialist at practice.

for better education of people with rhinitis about their condition and available treatments ($p < 0.0001$; Fig. 3).

Stratification by Physician Opinion Regarding whether Allergic Rhinitis and Nonallergic Rhinitis Should Be Treated and Managed Similarly

Table 5 shows the survey results stratified by physician opinion regarding the statement that allergic rhinitis and nonallergic rhinitis should be treated and managed similarly. Neither the number of years that the physicians had been practicing medicine nor whether or not they suffered from allergic rhinitis themselves influenced their responses to the statement (not shown in Table). Physicians who disagreed with the statement that allergic rhinitis and nonallergic rhinitis should be treated and managed similarly were more likely to report an allergy specialist at their practice and were somewhat more likely to prescribe more than one class of medication. In deciding how to treat rhinitis, the patient's descriptions of symptom severity and the impact of

symptoms on their daily activities were both categorized as “extremely important” by a greater percentage of physicians who disagreed that allergic rhinitis and nonallergic rhinitis should be managed similarly in comparison with those who agreed.

A greater percentage of physicians who agreed that allergic rhinitis and nonallergic rhinitis should be managed similarly also agreed that allergic rhinitis and nonallergic rhinitis present with the same symptoms (78%) compared with physicians who were neutral (65%) or disagreed with the statement (46%, $p < 0.0001$). Of those physicians who agreed that allergic rhinitis and nonallergic rhinitis should be managed similarly, a smaller proportion believed that patients with allergic rhinitis have, on average, more severe ocular symptoms than patients with nonallergic rhinitis (75%) in comparison with physicians who were neutral (83%) or who disagreed that the two conditions should be managed similarly (87%, $p = 0.0059$). Conversely, among physicians who agreed that allergic rhinitis and nonallergic rhinitis should be managed

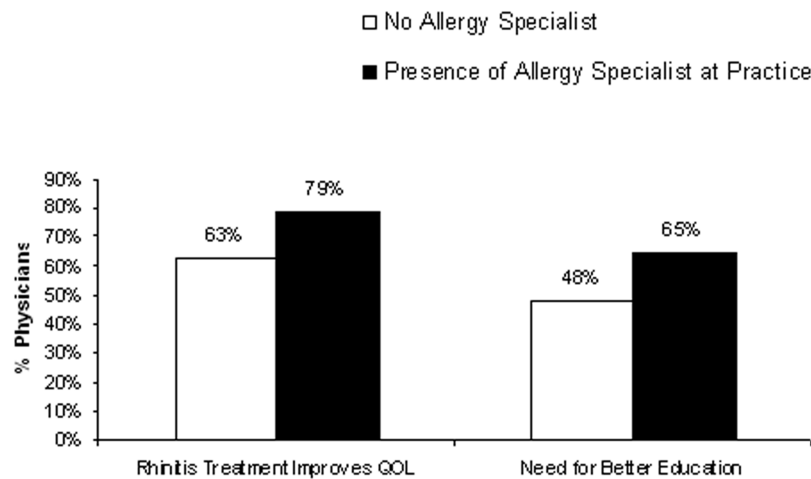


Figure 3. Physician opinions regarding treatment and education (percent who strongly agreed with statements) stratified by presence of allergy specialist at practice.

Table 5 Survey findings stratified by physician opinion regarding whether allergic rhinitis and nonallergic rhinitis should be treated and managed similarly

	Allergic Rhinitis and Nonallergic Rhinitis Should Be Treated and Managed Similarly			Total	p Value
	Disagree	Neutral	Agree		
Allergy specialist at practice					
No	130 (34%)	73 (47%)	120 (55%)	323 (43%)	<0.0001
Yes	253 (66%)	82 (53%)	97 (45%)	432 (57%)	
Valid <i>n</i>	383	155	217	755	
For all the allergic and nonallergic (chronic) rhinitis patients treated during past 30 days, what percentage were prescribed					
1 class of medication	30%	32%	35%	32%	0.0499
>1 class of medication	64%	61%	59%	62%	0.0155
No prescription medications	5.6%	6.7%	6.7%	6.2%	0.1623
The patient's description of the severity of his/her symptoms in deciding how to treat					
Not at all to fairly important	8 (2.1%)	4 (2.6%)	6 (2.7%)	18 (2.4%)	0.0285
Very important	92 (24%)	58 (37%)	63 (29%)	213 (28%)	
Extremely important	286 (74%)	93 (60%)	151 (69%)	530 (70%)	
Valid, <i>n</i>	386	155	220	761	
The patient's description of the impact of his/her symptoms on activities of daily living in deciding how to treat					
Not at all to fairly important	20 (5.2%)	11 (7.1%)	24 (11%)	55 (7.2%)	0.0092
Very important	127 (33%)	67 (43%)	80 (36%)	274 (36%)	
Extremely important	239 (62%)	77 (50%)	116 (53%)	432 (57%)	
Valid <i>n</i>	386	155	220	761	

similarly or who had a neutral opinion with regard to this statement, a greater proportion agreed that, on average, patients with allergic rhinitis have more severe nasal symptoms than patients with nonallergic rhinitis (37% and 43%, respectively) compared with 30% of physicians who disagreed with the statement ($p < 0.0001$).

DISCUSSION

Although rhinitis is not a life-threatening disease, the condition imposes a sizeable burden on patients so that physicians must be aware of its severity and impact on patient quality of life.^{2,5,14,27} Findings from this large survey of U.S. physicians indicate that most physicians perceived the rhinitis severity of the majority of pa-

tients they saw in the last 30 days as moderate. Physicians who perceived patients as having moderate-to-severe symptoms were likely to prescribe multiple prescription medications while physicians with mild rhinitis patients were likely to recommend nonprescription products. As might be expected, physicians who categorized the majority of their patients as having severe rhinitis were more likely to report that patients missed school or work than physicians who categorized the majority of their patients as having mild or moderate symptoms.

The survey also shows that more than one-half of responding physicians had an allergy specialist at their practices and presence of an allergy specialist had a role in the assessment and treatment of rhinitis. For example, physicians with an allergy specialist at their practice reported treating an average of twice as many rhinitis patients as those without a specialist. An allergy specialist's presence at a practice increased the likelihood that patients would be prescribed more than one class of medication and that the patient's description of the severity of symptoms and the impact of symptoms on daily activities would be rated as "extremely important" in any treatment decisions. Physicians with an allergy specialist at their practice were less likely to believe that allergic rhinitis and nonallergic rhinitis present with the same symptoms and that the two conditions should be treated and managed similarly.

Physicians' opinion regarding the statement that allergic rhinitis and nonallergic rhinitis should be treated and managed similarly had a role in the assessment and treatment of rhinitis reported by physicians. Those who disagreed with this statement were more likely to report that a higher percentage of their patients were prescribed more than one class of medication and were more likely to rate the patient's description of the severity of symptoms and the impact of symptoms on daily activities as being "extremely important" in their treatment decisions. Physicians who disagreed that allergic rhinitis and nonallergic rhinitis should be treated and managed similarly were also more likely to agree that patients with allergic rhinitis have more severe ocular symptoms than patients with nonallergic rhinitis and were more likely to disagree that patients with allergic rhinitis have more severe nasal symptoms than patients with nonallergic rhinitis. Physicians who agreed that allergic rhinitis and nonallergic rhinitis should be treated and managed similarly were more likely to agree that the two conditions presented with the same symptoms.

Results from this survey suggest that the input of an allergy specialist at a medical practice results in an increased awareness of the distinction between allergic rhinitis and nonallergic rhinitis symptoms and management, greater appreciation of the importance of the

impact of symptoms on the patient's quality of life in making treatment decisions, and more willingness to prescribe multiple medications to control rhinitis. Likewise, an awareness of the distinction between allergic rhinitis and nonallergic rhinitis symptoms and management appears to be associated with a greater appreciation of the importance of the impact of symptoms on the patient's quality of life and willingness to prescribe multiple medications. These findings may, therefore, reveal a role for education in primary care to increase physicians' awareness of allergic rhinitis and nonallergic rhinitis, the burden these conditions place on patients, and their differing management strategies.

Previous surveys of physicians' attitudes toward rhinitis also reveal opportunities for improving awareness. In a U.K. primary care survey,²⁸ physicians reported that perennial allergic rhinitis was particularly difficult to treat because of high patient expectations and limited treatment efficacy and that they felt patients should learn to live with the condition. In the same survey,²⁸ seasonal allergic rhinitis was considered a low priority for treatment. In another U.K. survey,²⁹ only 14% of primary care physicians could accurately describe the symptoms of allergic rhinitis, and only 0.6% issued adequate treatment. A Danish survey³⁰ found that 83% of patients diagnosed with moderate or severe allergic rhinitis were undertreated according to "Allergic Rhinitis and its Impact on Asthma" guidelines.¹²

Although the results of the current survey are limited by the fact that they were derived from a one-time, cross-sectional survey of physicians in a managed care claims database, they provide insight into physicians' perceptions of the impact of allergic rhinitis and nonallergic rhinitis on patient quality of life and of the severity symptoms.

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