

Patient Perceptions of the Capabilities of Internists: A Multi-Center Survey

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PURPOSE: Surveys conducted by the American College of Physicians–American Society of Internal Medicine have shown that the public has varying opinions about the capabilities of internists. However, the perceptions of patients seeking care from internists remain uncertain. We wished to determine how patients visiting general internists perceived them and discover whether patients understood the differences between internists and other primary care physicians.

SUBJECTS AND METHODS: We surveyed established adult patients visiting three general internal medicine clinics in Georgia, Iowa, and Vermont. Patients answered 11 questions about their perceptions of an internist's scope of care and selected which of 24 diseases, symptoms, or examination skills they thought an internist could manage.

RESULTS: Patients completed 601 (66%) of the 911 surveys distributed. Nearly half of patients (45%) confused internists

with family physicians and 39% thought internists could treat children. Patients with college education were more than twice as likely to know that internists were not interns (Odds ratio = 2.6, 95% confidence interval 1.8 to 3.8, $P < 0.001$) compared with patients having less education. Only 50% of patients thought an internist was trained in women's health. Significantly more ($P < 0.001$) patients demonstrated confidence in an internist's ability to treat symptoms (76%) than treat specific diseases (59%) or perform clinical examinations (54%).

CONCLUSIONS: Established patients seeking care in internal medicine clinics lack consensus on the capabilities of internists, especially on how they differ from other specialties. Continued public education efforts should be considered to promote better understanding of the role of the internist as a specialist in adult medicine. *Am J Med.* 2001;110:111–117. ©2001 by Excerpta Medica, Inc.

The specialty of internal medicine faces many challenges in remaining competitive in an increasingly complex managed care environment. Low public awareness of the capabilities of internists is often mentioned as one of these challenges. This problem is complicated by debates within the specialty among physicians possessing different visions of the future. Internists often have varying opinions on the role of hospitalists and specialists. There is also a lack of consensus on the degree of involvement internists should have in women's health and adolescent medicine.

The term internal medicine was introduced in Germany in the 1880s to describe a discipline of clinical medicine outside of surgery that was based on physiology (1). Almost 20 years ago, Bean (1) and Friedman (2) sug-

gested that the term internist could be confused with an intern or general practitioner. Kurtz (3,4) and Goldman (5) more recently argued to change the specialty name from internal medicine to adult medicine, with the goal of improved patient understanding of the role of the internists as specialists in adult medicine. The perceptions of patients have gained increasing importance in the business and practice of medicine, and there is growing sentiment that if internists establish a public reputation for special expertise in adult medicine, they may be more effective in attracting and retaining patients.

In 1996, the American College of Physicians–American Society of Internal Medicine (ACP-ASIM) perceived a need for patient education on the adult specialty expertise of the internist. To assess public perceptions of internists, they performed a telephone survey of 1,000 people selected at random in the United States. The survey found that only 18% of respondents thought internists could act as primary care physicians, whereas 56% thought they were specialists. The ACP-ASIM survey also revealed that only about a third of patients felt comfortable with an internist treating health problems specific to women such as osteoporosis, cervical cancer screening, and breast examinations (6). These results prompted the ACP-ASIM to mount a comprehensive publicity campaign. The ACP-ASIM decided to retain the traditional specialty name of internal medicine in the advertising campaign

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Table 1. Demographic Characteristics of Survey Respondents

	Georgia (n = 215)	Iowa (n = 189)	Vermont (n = 197)	Total (n = 601)
Characteristics	Mean \pm SD or Number (%)			
Age (years)	50.1 \pm 13.5	48.3 \pm 13.2	49.1 \pm 14.6	49.2 \pm 13.8
Male	102 (47%)	68 (36%)	79 (40%)	249 (41%)
College education	120 (56%)	98 (52%)	124 (63%)	342 (57%)

and linked it to the descriptive phrase “Doctors for Adults” (7).

Several questions remained after the ACP-ASIM survey. One of the most intriguing findings of the survey was that patients did not associate internists with primary care managers. We therefore wanted to determine whether patients confused internists with other primary care specialties, and whether these misperceptions influenced their opinion on internists’ scope of care. We also determined whether patients were most confident visiting their internist to seek treatment for specific diseases, symptoms, or preventive examinations, and whether differences in patient age, sex, location, or education changed these perceptions. We focused on patients enrolled in internal medicine clinics to assess whether the patient opinions found in the ACP-ASIM study could be explained by a lack of contact with internists.

METHODS

Established patients over the age of 17 years who visited one of three general internal medicine clinics were eligible to participate in the study. The sites consisted of an internal medicine clinic located in a military community hospital in Columbus, Georgia; a university-affiliated primary care clinic in Iowa City, Iowa; and a community-based university-affiliated clinic in Burlington, Vermont. Written surveys were given to consecutive patients meeting the eligibility criteria when they arrived for their appointment. Surveys were collected in a labeled box in the waiting room before patients saw their physician. All surveys were anonymous, and participation was voluntary. The first page of the survey consisted of 11 Likert scale questions where patients were asked whether they agreed or disagreed with a statement regarding internists’ scope of care. A score of 1 indicated strong agreement, a score of 3 indicated neither agreement nor disagreement, and a score of 5 indicated strong disagreement. The 11 questions were developed after discussion among the authors to explore areas they thought required further elaboration after the ACP-ASIM benchmark study. The questions are shown in Table 2.

The second page of the survey asked the patient in

which of 24 situations (diseases, symptoms, or preventive examinations) they would feel confident seeking care from an internist. The list of 24 diseases, symptoms, and skills was derived from an informal survey by the principal author that asked 60 patients what 10 areas (diseases, symptoms, or skills) they thought were most important for their primary care physician to be competent in. The answers were ranked by frequency of selection, and the top 24 answers were selected to be part of the survey. The diseases, symptoms, and skills are listed in Table 3. Patients were asked to place a check next to each of the items for which they thought an internist was competent.

Statistical significance was set at a *P* value <0.05. Demographic data were compared between regions using the chi-square test for proportions and a one-way analysis of variance (ANOVA) test for interval data. We determined whether age, sex, location, and educational level were associated with correct responses to the questions about internists’ characteristics and capabilities using a multivariate logistic regression model. Similar models were developed for the outcome of confidence that an internist could manage (or perform) the 24 diseases or skills. The knowledge that internists were not family physicians or interns was added to the list of independent variables. Statistical analyses were performed using SPSS for Windows version 10.0 (SPSS Inc., Chicago, Illinois).

RESULTS

Demographics

Of 911 surveys distributed, 639 (70%) were returned, of which 601 (66%) were fully completed. Of the completed surveys, we collected 215 (69%) of 311 at the Georgia site, 197 (52%) of 375 at the Vermont site, and 189 (84%) of 225 at the Iowa site. Slightly more than half (59%) of patients were women, about 75% were under the age of 60, and the majority (57%) had attended at least some college. There were no differences in patient age, sex, or education among the three survey sites (Table 1).

Patient Perceptions of the Definition of an Internist

Although many patients (45%) confused internists with family practitioners and general practitioners, few (19%)

Table 2. Likert Questions on Characteristics of Internists (N = 601)

Question	Agree	Undecided	Disagree
Questions worded with agree as correct response			
1. A doctor of internal medicine (internist) specializes in nonsurgical diseases of adults	62%	18%	20%
2. Doctors of internal medicine can care for patients in both an office and hospital setting	87%	8%	5%
3. A doctor of internal medicine (internist) is trained to care for patients in an intensive care setting	46%	26%	28%
4. Doctors of internal medicine require at least 3 years of training after graduation from medical school	59%	36%	5%
5. Internal medicine training is required for entry into subspecialties such as cardiology, gastroenterology, and pulmonary	64%	30%	6%
6. A doctor of internal medicine (internist) is usually trained in women's health issues	50%	25%	25%
Questions worded with disagree as correct response			
1. A doctor of internal medicine (internist) is another name for a family practitioner	45%	15%	40%
2. A doctor of internal medicine (internist) is another name for a general practitioner	45%	18%	37%
3. A doctor of internal medicine (internist) is a type of an intern	19%	14%	67%
4. A doctor of internal medicine (internist) is usually qualified to care for children under 17	39%	25%	36%
5. A doctor of internal medicine focuses on specific diseases rather than the whole person's health	22%	14%	64%

thought an internist was a type of intern (Table 2). Most (83%) of the respondents who confused an internist with a family physician also confused an internist with a general practitioner.

Patients over 60 years old were more likely to confuse an internist with a family physician when compared with younger patients. (odds ratio [OR] = 1.6, 95% confidence interval [CI]: 1.1 to 2.4). Men were more likely than women to confuse an internist with an intern (OR = 1.6, 95% CI: 1.1 to 2.3). Patients who attended college were more likely to know the difference between an internist and an intern (OR = 2.6, 95% CI: 1.8 to 3.8) or a family physician (OR = 1.9, 95% CI: 1.4 to 2.7). They also were more apt to think internists focused on a whole person's health (OR = 2.6, 95% CI: 1.8 to 3.8).

Patient Perception of the Scope of Care of an Internist

Patients generally had more confidence in internists as a diagnostician of symptoms than in their ability to manage specific diseases or perform the listed examination skills (Table 3). Whereas about two thirds of patients thought internists could perform a preoperative examination or vaccination, only about half felt confident in internists' ability to conduct breast examinations and prostate examinations. Only 38% of patients thought an internist could perform a gynecologic examination.

When these 24 items were divided into 3 categories,

76% (2,723 of 3,606) of patient responses indicated confidence in internists' abilities to manage the 6 listed symptoms, as compared with 59% (4,578 of 7,813) for the 13 listed diseases, and 54% (1,635 of 3,005) for the 5 listed clinical skills (Table 4). The proportion of patients confident in visiting an internist for treatment of symptoms was significantly greater than the proportion of patients confident in internists' abilities in the management of diseases or in clinical examination skills ($P < 0.001$).

Education had the strongest effect on patient perceptions, with college-educated patients having significantly more confidence in an internist's ability to manage a variety of diseases and symptoms (Table 5). Women were more likely than men to believe internists could perform pelvic and breast examinations, whereas men were more confident that internists could examine the prostate. Patients over age 60 years were more likely to believe internists could manage emphysema and coronary artery disease, but they were less likely to believe they were able to care for human immunodeficiency virus (HIV) infection.

Patients who knew an internist was not an intern were more likely to perceive internists as being competent in a large number of areas (Table 6). In contrast, patients who knew internists and family physicians were different did not differ in perceptions of internists' scope of care in most categories. These patients had reduced confidence that internists could treat sports injuries and perform

Table 3. Patient Perception of Medical Problems Within an Internist's Scope of Care (N = 601)

Medical Problem	Percent Confident in Internist's Care
Diseases	
High blood pressure	88%
High cholesterol	82%
Diabetes (high blood sugar)	80%
Pneumonia	75%
Thyroid problem	65%
Emphysema	53%
Stroke	50%
Coronary heart disease/angina	49%
Depression	48%
Congestive heart failure	47%
Osteoporosis	46%
HIV infection (AIDS)	46%
Sports injury	41%
Symptoms	
Stomach pain	85%
Fatigue	79%
Headaches	76%
Difficulty breathing	72%
Chest pain	71%
Arthritis pain	70%
Preventive medicine and exam skills	
Vaccination	70%
Presurgery evaluation	64%
Prostate examination	53%
Breast examination	48%
Gynecologic examination	38%

HIV = human immunodeficiency virus; AIDS = acquired immune deficiency syndrome.

breast examinations but were more confident that internists could treat heart failure, coronary artery disease, and thyroid disorders.

DISCUSSION

Although much has been written about the ideal definition and role of an internist from a physician's perspective, few studies have focused exclusively on patient perceptions. Our findings were similar in several aspects to a larger series of surveys performed by the ACP-ASIM in 1996–1997 (6). About 17% of patients in the ACP-ASIM benchmark survey thought an internist referred to a physician in training, compared with 19% in our study. In the ACP-ASIM survey, only 31% of patients thought internists would be appropriate to manage selected women's health issues such as Papanicolaou smears and breast examinations, similar to the 38% to 48% rate of patient confidence in women's health issues in our study. Finally, in both studies, about 60% of patients agreed that internists were specialists. Thus, it appears that our subjects

held similar views about internal medicine in several categories when compared with the population-based subjects of the larger study.

Although the patients in our study all received care from internists, we found that they were often confused about the meaning of the term "internist." The most common misconception, among nearly half of the patients, was that the terms internist, family practitioner, and general practitioner were synonymous; an additional 20% were uncertain whether the specialties were different. Even more surprisingly, more than a third (39%) of the patients thought internists were usually qualified to care for patients under age 17 years of age, although none of the three study clinics cared for patients in this age group.

We thought it was possible that these beliefs may have been affected by a convergence of family medicine and internal medicine in recent years. There is a growing perception that many executives in health maintenance organizations consider family physicians and internists interchangeable in the outpatient setting (8). In one study, nearly half of current and recent internal medicine residents thought the distinctions between the two specialties were becoming blurred (9). One possible explanation may be that family physicians have restricted their scope of care by performing less surgery and obstetrics (10). Many general internists have also narrowed their scope of care, given the increasing number of subspecialists and hospitalists. Incentives promoting the use of hospitalists may lead many internists to concentrate exclusively in either an inpatient or outpatient role (11,12).

Finally, although internists are traditionally thought of as adult physicians, there is evidence that older children and adolescents comprise about 5% to 10% of their patients (13,14). Therefore, the inclusion of older children and adolescents in some internists' practices may contribute to perceptions that internists are able to care for adolescent or pediatric patients.

Most patients, however, recognized that internists could practice in both inpatient and outpatient settings, that internal medicine training was required before subspecialty entry, and that internists were experts in non-surgical adult diseases. These correct perceptions were most common in patients who did not confuse internists with interns, family physicians, or general practitioners.

The majority of patients were confident in internists' ability to manage nonspecific symptoms, but fewer had confidence in their ability to treat many chronic diseases. For example, 71% of patients trusted internists to evaluate chest pain, but less than half thought they could treat coronary artery disease or heart failure. We were uncertain whether greater patient confidence in treatment of symptoms resulted from a perception of internists as adept diagnosticians or from a lack of awareness that internists have expertise in managing chronic adult dis-

Table 4. Patient Factors Affecting Patient Confidence in Internists' Competence

Factor	Ability to Perform/Treat	Odds Ratio (95% Confidence Interval)*	P Value
Gender specific examination	Breast examination	2.2 (1.5–3.1)	<0.001
	Pelvic examination	1.9 (1.4–2.8)	<0.001
	Prostate examination	2.5 (1.8–3.6)	<0.001
Education higher than high school	Hyperlipidemia	1.8 (1.2–2.7)	0.009
	Diabetes mellitus	2.1 (1.4–3.1)	0.001
	Pneumonia	1.7 (1.1–2.5)	0.01
	Emphysema	1.9 (1.3–2.9)	0.001
	Stroke	1.5 (1.1–2.0)	0.03
	Coronary artery disease	1.7 (1.2–2.3)	0.003
	HIV infection	1.6 (1.1–2.3)	0.007
	Fatigue	1.7 (1.1–2.6)	0.01
	Dyspnea	1.6 (1.1–2.3)	0.01
	Chest pain	1.5 (1.0–2.2)	0.03
	Vaccination	1.6 (1.1–2.3)	0.02
	Breast examination	1.7 (1.2–2.4)	0.004
	Age >60 years	Emphysema	1.9 (1.3–2.9)
Coronary artery disease		1.5 (1.0–2.3)	0.03
Breast exam		1.6 (0.1–2.4)	0.03
HIV infection		0.6 (0.4–0.9)	0.009

* Adjusted for age, sex, education level, location, ability to discern an internist from an intern, and ability to discern an internist from a family physician.

HIV = human immunodeficiency virus.

eases. Knowledge that internists were different from other generalists increased the patient's confidence in internists' abilities in many specific disease categories. Therefore, we believe that lack of awareness of the internist as a specialist in adult medicine is the most important

factor in the confidence difference between treatment of symptoms and diseases.

One of the most striking findings was how differences in education affected patient perceptions. Patients who attended college were less likely to confuse internists with

Table 5. Effect of Patients' Ability to Differentiate Primary Care Specialties on Their Perceptions of Internist Competence (N = 601)

Factor	Confidence in Internist Ability to Perform/Treat	Odds Ratio (95% Confidence Interval)*	P Value
Able to discern internist from intern	Hypertension	2.1 (1.3–3.7)	0.005
	Diabetes mellitus	1.8 (1.1–2.8)	0.01
	Pneumonia	2.6 (1.7–3.9)	0.001
	Thyroid disease	1.7 (1.1–2.4)	0.01
	Emphysema	1.8 (1.3–2.7)	0.002
	HIV infection	1.8 (1.2–2.7)	0.002
	Fatigue	2.3 (1.5–3.6)	0.001
	Headache	2.1 (1.4–3.2)	0.001
	Dyspnea	1.7 (1.1–2.5)	0.01
	Vaccination	2.7 (1.8–4.0)	<0.001
	Preoperative examination	1.8 (1.3–2.7)	0.002
	Prostate examination	1.6 (1.1–2.3)	0.006
	Able to discern internist from family physician	Thyroid disease	1.7 (1.2–2.5)
Coronary artery disease		1.5 (1.0–2.1)	0.03
Congestive heart failure		1.4 (1.0–2.0)	0.04
Sports injuries		0.7 (0.5–0.9)	0.02
Breast examination		0.6 (0.4–0.9)	0.02

* Adjusted for age, sex, education level, location, ability to discern an internist from an intern, and ability to discern an internist from a family physician.

HIV = human immunodeficiency virus.

family physicians and more likely to identify an internist as a specialist in adult diseases. Furthermore, college-educated patients had more confidence in the ability of internists to provide care for a variety of symptoms and diseases. This suggests that future public awareness efforts promoting internal medicine should be more understandable to patients of diverse educational levels.

As patients become increasingly knowledgeable consumers of health care, their perceptions about the capabilities of each medical specialty may affect their choice of physicians. For example, a woman may desire the convenience of comprehensive health services, including gynecologic care, from the same physician. In the ACP-ASIM survey, 53% of female patients thought that it was important that a physician include gynecology in his or her practice (6). If a patient perceives that an internist is not trained in women's health, she may seek care from a family physician or gynecologist. Although we thought women's health care was within the realm of the general internist, it is possible that patients base their perception on what the internist routinely does, rather than what they were trained to do. Evidence suggests that family physicians have six times as many patient visits for gynecologic disorders as do general internists (15). If internists fail to attain and advertise competence in women's health, they risk losing credibility in claiming to care for the entire patient. The Association of Professors of Medicine recently acknowledged deficits in women's health training and suggested steps to correct the deficiencies (16).

Different groups of patients may value different competencies in their physicians. For example, active, fitness-oriented patients may think that skills such as treating sports injuries are important. Only 41% of our patients thought that internists could treat sports injuries. Patients who did not confuse internists with family physicians had even less confidence. Their perception may be founded in the reality that family medicine places more emphasis on orthopedic training in residency than does internal medicine. Family medicine training programs average 160 to 200 hours of such training, whereas most internal medicine residencies have only optional elective rotations (17). Gaining proficiency in disorders that are common in the outpatient setting and important to patients may be essential to attract and retain patients. Such skills should receive emphasis in residency training and continuing medical education programs.

There are several limitations to our study. First, there is no definitive definition of the scope of care of a general internist. Because scope of care varies widely among internists, validating our survey against a "gold standard" was not feasible. Next, our study was not population-based but was drawn from three general internal medicine clinics whose patients have greater education than the general population. In addition, we do not know the perceptions or the characteristics of the patients who did

not complete the survey. All survey sites were conducted in cities with populations ranging from 80,000 to 250,000, which may affect generalizability to more rural or urban areas. Finally, although we adjusted for regional differences, we were unable to draw conclusions about regional variation in patient perceptions, as we studied only a single group practice in each area.

In recent years, internists have debated whether to change the name of internal medicine to adult medicine. Advocates of the change believe that a new specialty name will be easier for patients to understand, may eliminate ambiguous public perceptions of the word "internal," and would strengthen the link between generalist and subspecialty internists (5). A general internist would be known as an adult medicine specialist and subspecialists could use the descriptor "adult" as well. For example, a cardiologist could be called an adult cardiologist. Opponents of a name change think it would detach the specialty from past traditions and overlooks a less dramatic solution of more vigorous support for patient education and marketing (18,19).

We favor further research to clarify whether a name change would change patient perceptions of internal medicine beyond the changes that could be achieved by patient education alone. Despite nostalgia for the past, if a change in name improves patients' understanding of what internists know and do, it should be seriously considered. Direct comparisons between patients at different primary care specialty offices may provide insight into opinions of patients who did not choose internists as their physicians. Comparing patients in general and subspecialty internal medicine clinics may also clarify what role patient choice and referral plays in physician selection for treatment of various diseases. The specific characteristics and skills that patients value in their primary care physicians should be investigated to allow internists to be more responsive to patient needs. Finally, although the ACP-ASIM has shown that focused marketing in large urban areas can improve some patient perceptions, we need to know what interventions at the individual physician practice and hospital level are most useful. Until such research is completed, internists should promote the capabilities of their specialty through research, education, and community service. Although the scope of care of a typical internist may evolve over time, embracing the traditional approaches to quality, complex clinical problem solving, and patient advocacy that have distinguished our specialty in the past will preserve its viability for the future.

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