

Most Common Dermatologic Conditions Encountered by Dermatologists and Nondermatologists

Erin N. Wilmer, MD; Cheryl J. Gustafson, MD; Christine S. Ahn, MD; Scott A. Davis, MA;
Steven R. Feldman, MD, PhD; William W. Huang, MD, MPH

Practice Points

- Approximately half of skin-related visits are to nondermatologists, such as family medicine physicians, pediatricians, and internists.
- Skin conditions that most frequently present to nondermatologists are different from those seen by dermatologists.
- Education efforts in nondermatology specialties should be targeted toward the common skin diseases that present to these specialties to maximize the yield of medical education and improve diagnostic accuracy and patient outcomes.

The dermatologic conditions that are most commonly encountered by nondermatologists are not well characterized, which can hamper efforts to train them in skin disease management. The purpose of this study was to identify the 20 most common dermatologic conditions encountered by nondermatologic specialties (ie, emergency medicine, family practice, general surgery, internal medicine, otolaryngology, pediatrics). Data from the National Ambulatory Medical Care Survey from 2001 to 2010 were analyzed to evaluate the dermatologic diagnoses made by each specialty during this time period. The most common skin conditions reported by dermatologists were compared to those reported by nondermatologists.

Nondermatologists evaluated 52.9% of cutaneous diseases that presented in the outpatient setting. Among each nondermatologic specialty included in the study, only 6 to 10 of the top 20 conditions overlapped with the top 20 conditions reported by dermatologists. This study is a retrospective review of a large database and only included skin conditions that were diagnosed in an outpatient setting. The skin conditions that most frequently presented to nondermatologists differed considerably from those most commonly seen by dermatologists. Because dermatologists often are responsible for training nondermatologists in the diagnosis and management of skin disease, curriculum content should reflect these differences to enhance the efficacy of such training opportunities.

Cutis. 2014;94:285-292.

From the Department of Dermatology, Wake Forest School of Medicine, Winston-Salem, North Carolina. Dr. Feldman also is from the Departments of Pathology and Public Health Sciences.

The authors report no conflict of interest.

Correspondence: William W. Huang, MD, MPH, Department of Dermatology, Wake Forest School of Medicine, Medical Center Boulevard, Winston-Salem, NC 27157-1071 (whuang@wakehealth.edu).

Skin diseases are highly prevalent in the United States, affecting an estimated 1 in 3 Americans at any given time.^{1,2} In 2009 the direct medical costs associated with skin-related diseases, including health services and prescriptions, was approximately \$22 billion; the annual total economic burden was estimated to be closer to

\$96 billion when factoring in the cost of lost productivity and pay for symptom relief.^{3,4} Effective and efficient management of skin disease is essential to minimizing cost and morbidity. Nondermatologists traditionally have diagnosed the majority of skin diseases.^{5,6} In particular, primary care physicians commonly manage dermatologic conditions and often are the first health care providers to encounter patients presenting with skin problems. A predicted shortage of dermatologists will likely contribute to an increase in this trend.^{7,8} Therefore, it is important to adequately prepare nondermatologists to evaluate and treat the skin conditions that they are most likely to encounter in their scope of practice.

Residents, particularly in primary care specialties, often have opportunities to spend 2 to 4 weeks with a dermatologist to learn about skin diseases; however, the skin conditions most often encountered by dermatologists may differ from those most often encountered by physicians in other specialties. For instance, one study demonstrated a disparity between the most common skin problems seen by dermatologists and internists.⁹ These dissimilarities should be recognized and addressed in curriculum content. The purpose of this study was to identify and compare the 20 most common dermatologic conditions reported by dermatologists versus those reported by nondermatologists (ie, internists, pediatricians, family physicians, emergency medicine physicians, general surgeons, otolaryngologists) from 2001 to 2010. Data also were analyzed to determine the top 20 conditions referred to dermatologists by nondermatologists as a potential indicator for areas of further improvement within medical education. With this knowledge, we hope educational curricula and self-study can be modified to reflect the current epidemiology of cutaneous diseases, thereby improving patient care.

Methods

Data from 2001 to 2010 were extracted from the National Ambulatory Medical Care Survey (NAMCS), which is an ongoing survey conducted by the National Center for Health Statistics. The NAMCS collects descriptive data regarding ambulatory visits to nonfederal office-based physicians in the United States. Participating physicians are instructed to record information about patient visits for a 1-week period, including patient demographics, insurance status, reason for visit, diagnoses, procedures, therapeutics, and referrals made at that time. Data collected for the NAMCS are entered into a multistage probability sample to produce national estimates. Within dermatology, an average of 118 dermatologists are sampled each year, and over

the last 10 years, participation rates have ranged from 47% to 77%.

International Classification of Diseases, Ninth Revision, Clinical Modification codes were identified to determine the diagnoses that could be classified as dermatologic conditions. Select infectious and neoplastic disorders of the skin and mucous membrane conditions were included as well as the codes for skin diseases. Nondermatologic diagnoses and V codes were not included in the study. Data for all providers were studied to identify outpatient visits associated with the primary diagnosis of a dermatologic condition. Minor diagnoses that were considered to be subsets of major diagnoses were combined to allow better analysis of the data. For example, all tinea infections (ie, dermatophytosis of various sites, dermatomycosis unspecified) were combined into 1 diagnosis referred to as tinea because the recognition and treatment of this disease does not vary tremendously by anatomic location. Visits to dermatologists that listed nonspecific diagnoses and codes (eg, other postsurgical status [V45.89], neoplasm of uncertain behavior site unspecified [238.9]) were assumed to be for dermatologic problems.

Sampling weights were applied to obtain estimates for the number of each diagnosis made nationally. All data analyses were performed using SAS software and linear regression models were generated using SAS PROC SURVEYREG.

Data were analyzed to determine the dermatologic conditions most commonly encountered by dermatologists and nondermatologists in emergency medicine, family medicine, general surgery, internal medicine, otolaryngology, and pediatrics; these specialties include physicians who are known to commonly diagnose and treat skin diseases.¹⁰ Data also were analyzed to determine the most common conditions referred to dermatologists for treatment by nondermatologists from the selected specialties. Permission to conduct this study was obtained from the Wake Forest University institutional review board (Winston-Salem, North Carolina).

Results

From 2001 to 2010, more than 700 million outpatient visits for skin-related problems were identified, with 676.3 million visits to dermatologists, emergency medicine physicians, family practitioners, general surgeons, internists, otolaryngologists, and pediatricians. More than half (52.9%) of all skin-related visits were addressed by nondermatologists during this time. Among nondermatologists, family practitioners encountered the greatest number of skin diseases (20.5%), followed by pediatricians

(11.3%), internists (9.2%), general surgeons (3.4%), otolaryngologists (1.0%), and emergency medicine physicians (0.2%)(Table 1).

Benign tumors and acne were the most common cutaneous conditions referred to dermatologists by nondermatologists (10.6% and 10.1% of all dermatology referrals, respectively), followed by nonmelanoma skin cancers (9.7%), contact dermatitis (8.8%), and actinic keratosis (7.8%) (Table 2). The top 20 conditions referred to dermatologists accounted for 83.7% of all outpatient referrals to dermatologists.

Among the diseases most frequently reported by nondermatologists, contact dermatitis was the most common (12.0%), with twice the number of visits to nondermatologists for contact dermatitis than to dermatologists (51.6 million vs 25.3 million). In terms of disease categories, infectious skin diseases (ie, bacterial [cellulitis/abscess], viral [warts, herpesvirus], fungal [tinea] and yeast [candida] etiologies) were the most common dermatologic conditions reported by nondermatologists (Table 2).

The top 20 dermatologic conditions reported by dermatologists accounted for 85.4% of all diagnoses made by dermatologists. Diseases that were among the top 20 conditions encountered by dermatologists but were not among the top 20 for nondermatologists included actinic keratosis, seborrheic keratosis, atopic dermatitis, psoriasis, alopecia, rosacea,

dyschromia, seborrheic dermatitis, follicular disease, and neoplasm of uncertain behavior of skin. Additionally, 5 of the top 20 conditions encountered by dermatologists also were among the top 20 for only 1 individual nondermatologic specialty; these included atopic dermatitis (pediatrics), seborrheic dermatitis (pediatrics), psoriasis (internal medicine), rosacea (otolaryngology), and keratoderma (general surgery). Seborrheic dermatitis, psoriasis, and rosacea also were among the top 20 conditions most commonly referred to dermatologists for treatment by nondermatologists. Table 3 shows the top 20 dermatologic conditions encountered by nondermatologists by comparison.

Comment

According to NAMCS data from 2001 to 2010, visits to nondermatologists accounted for more than half of total outpatient visits for cutaneous diseases in the United States, whereas visits to dermatologists accounted for 47.1%. These findings are consistent with historical data indicating that 30% to 40% of skin-related visits are to dermatologists, and the majority of patients with skin disease are diagnosed by nondermatologists.^{5,6}

Past data indicate that most visits to dermatologists were for evaluation of acne, infections, psoriasis, and neoplasms, whereas most visits to nondermatologists were for evaluation of epidermoid

Table 1.

Skin-Related Visits Across All Specialties (2001-2010)^a

Specialty	Total Visits	Skin-Related Visits	Skin-Related Visits as Percentage of All Specialty Visits	Percentage of All Skin-Related Visits ^b
Dermatology	343,400,000	343,400,000	100%	47.1%
Emergency medicine	18,780,000	1,770,000	9.4%	0.2%
Family medicine	2,184,000,000	149,500,000	6.8%	20.5%
Internal medicine	1,468,000,000	67,210,000	4.6%	9.2%
Pediatrics	1,201,000,000	82,020,000	6.8%	11.3%
Otolaryngology	196,400,000	7,510,000	3.8%	1.0%
General surgery	192,600,000	24,870,000	12.9%	3.4%

^aData from the National Ambulatory Medical Care Survey.

^bNot all specialties are identified here. The total number of outpatient skin-related visits was 728,500,000.

Table 2.

Top 20 Dermatologic Conditions Seen by Dermatologists and Nondermatologists and Referrals to Dermatologists by Nondermatologists (2001-2010)^a

Rank	Dermatologists		Nondermatologists		Referrals	
	Condition	No. of Visits ^{b,c} (%)	Condition	No. of Visits ^{b,c} (%)	Condition	No. of Visits ^{b,c} (%)
1	Acne	39,070 (13.2)	Contact dermatitis	51,592 (12.0)	Benign tumor	6,717 (10.6)
2	Actinic keratosis	33,722 (11.4)	Cellulitis/abscess	36,811 (8.5)	Acne	6,436 (10.1)
3	NMSC	28,063 (9.5)	Rash	17,118 (4.0)	NMSC	6,173 (9.7)
4	Benign tumor	25,423 (8.6)	Epidermoid cyst	16,835 (3.9)	Contact dermatitis	5,584 (8.8)
5	Contact dermatitis	25,266 (8.5)	Tinea	16,823 (3.9)	Actinic keratosis	4,977 (7.8)
6	Seborrheic keratosis	16,659 (5.6)	Viral warts	15,988 (3.7)	Viral warts	3,400 (5.3)
7	Viral warts	14,807 (5.0)	Varicose veins	13,161 (3.1)	Seborrheic keratosis	3,175 (5.0)
8	Psoriasis	12,296 (4.2)	Disorder of skin, NOS	13,089 (3.0)	Psoriasis	2,325 (3.7)
9	Rosacea	9,469 (3.2)	NMSC	11,776 (2.7)	Alopecia	2,056 (3.2)
10	Epidermoid cyst	6,734 (2.3)	Benign tumor	11,217 (2.6)	Rosacea	1,600 (2.5)
11	Dyschromia	6,095 (2.1)	Candida	10,113 (2.3)	Dyschromia	1,472 (2.3)
12	Tinea	5,182 (1.8)	Uncomplicated herpes zoster	9,864 (2.3)	Disorder of skin, NOS	1,431 (2.3)
13	Neoplasm of uncertain behavior of skin	5,157 (1.7)	Acne	9,813 (2.3)	Tinea	1,272 (2.0)
14	Disorder of skin, NOS	4,706 (1.6)	Disturbance of skin sensation	8,504 (2.0)	Epidermoid cyst	1,257 (2.0)
15	Seborrheic dermatitis	4,260 (1.4)	Insect bite	8,348 (1.9)	Neoplasm of uncertain behavior of skin	1,231 (1.9)
16	Alopecia	3,985 (1.3)	Ulcer	7,299 (1.7)	Atopic dermatitis	1,061 (1.7)
17	Atopic dermatitis	3,667 (1.2)	Urticaria, NOS	6,868 (1.6)	Molluscum contagiosum	802 (1.3)
18	Keratoderma	2,987 (1.0)	Blepharitis, NOS	6,617 (1.5)	Other specified disorders of skin	801 (1.3)
19	Other specified disorders of skin	2,955 (1.0)	Impetigo	5,968 (1.4)	Seborrheic dermatitis	694 (1.1)
20	Other specified disease of hair/hair follicles	2,485 (0.8)	Uncomplicated herpes simplex	5,652 (1.3)	Rash	681 (1.1)

Abbreviations: NMSC, nonmelanoma skin cancer; NOS, not otherwise specified.

^aData from the National Ambulatory Medical Care Survey.

^bIn thousands.

^cReflects total of skin-related diagnoses (dermatologists, N=296,100,000; nondermatologists, N=431,870,000; referrals, N=63,550,000).

cysts, impetigo, plant dermatitis, cellulitis, and diaper rash.⁹ Over the last 10 years, acne has been more commonly encountered by nondermatologists, especially pediatricians. Additionally, infectious etiologies have been seen in larger volume by nondermatologists.⁹ Together, infectious cutaneous conditions make up nearly one-fourth of dermatologic encounters by emergency medicine physicians, internists, and family practitioners but are not within the top 20 diagnoses referred to dermatologists, which suggests that uncomplicated cases of cellulitis, herpes zoster, and other skin-related infections are largely managed by nondermatologists.^{5,6} Contact dermatitis, often caused by specific allergens such as detergents, solvents, and topical products, was one of the most common reported dermatologic encounters among dermatologists and nondermatologists and also was the fourth most common condition referred to dermatologists by nondermatologists for treatment; however, there may be an element of overuse of the *International Classification of Diseases, Ninth Revision* code, as any presumed contact dermatitis of unspecified cause can be reported under 692.9 defined as contact dermatitis and other eczema, unspecified cause. The high rate of referrals to dermatologists by nondermatologists may be for patch testing and further management. Additionally, there are no specific codes for allergic or irritant dermatitis, thus these diseases may be lumped together.

Although nearly half of all dermatologic encounters were seen by nondermatologists, dermatologists see a much larger proportion of patients with skin disease than nondermatologists and nondermatologists often have limited exposure to the field of dermatology during residency training. Studies have demonstrated differences in the abilities of dermatologists and nondermatologists to correctly diagnose common cutaneous diseases, which unsurprisingly revealed greater diagnostic accuracy demonstrated by dermatologists.¹¹⁻¹⁶ The increase in acne and skin-related infections reported by nondermatologists is consistent with possible efforts to increase formal training in frequently encountered skin diseases. In one study evaluating the impact of a formal 3-week dermatology curriculum on an internal medicine department, internists demonstrated 100% accuracy in the diagnosis of acne and herpes zoster in contrast to 29% for tinea and 12% for lichen planus.^{5,6}

The current Accreditation Council for Graduate Medical Education guidelines place little emphasis on exposure to dermatology training during residency for internists and pediatricians, as this training is not a required component of these programs.¹⁷ Two core problems with current training regarding the evaluation and management of cutaneous disease

are minimal exposure to dermatologic conditions in medical school and residency and lack of consensus on the core topics that should be taught to nondermatologists.¹⁸ Exposure to dermatologic conditions through rotations in medical school has been shown to increase residents' self-reported confidence in diagnosing and treating alopecia, cutaneous drug eruptions, warts, acne, rosacea, nonmelanoma skin cancers, sun damage, psoriasis, seborrhea, atopic dermatitis, and contact dermatitis; however, the majority of primary care residents surveyed still felt that this exposure in medical school was inadequate.¹⁹

In creating a core curriculum for dermatology training for nondermatologists, it is important to consider the dermatologic conditions that are most frequently encountered by these specialties. Our study revealed that the most commonly encountered dermatologic conditions differ among dermatologists and nondermatologists, with a fair degree of variation even among individual specialties. Failure to recognize these discrepancies has likely contributed to the challenges faced by nondermatologists in the diagnosis and management of dermatologic disease. In this study, contact dermatitis, epidermoid cysts, and skin infections were the most common dermatologic conditions encountered by nondermatologists and also were among the top skin diseases referred to dermatologists by nondermatologists. This finding suggests that nondermatologists are able to identify these conditions but have a tendency to refer approximately 10% of these patients to dermatology for further management. Clinical evaluation and medical management of these cutaneous diseases may be an important area of focus for medical school curricula, as the treatment of these diseases is within the capabilities of the nondermatologist. For example, initial management of dermatitis requires determination of the type of dermatitis (ie, essential, contact, atopic, seborrheic, stasis) and selection of an appropriate topical steroid, with referral to a dermatologist needed for questionable or refractory cases. Although a curriculum cannot be built solely on a list of the top 20 diagnoses provided here, these data may serve as a preliminary platform for medical school dermatology curriculum design. The curriculum also should include serious skin diseases, such as melanoma and severe drug eruptions. Although these conditions are less commonly encountered by nondermatologists, missed diagnosis and/or improper management can be life threatening.

The use of NAMCS data presents a few limitations. For instance, these data only represent outpatient management of skin disease. There is the potential for misdiagnosis and coding errors by the reporting physicians. The volume of data

Table 3.
Top 20 Dermatologic Conditions Encountered by Nondermatologists by Specialty (2001-2010)^a

Rank	Condition (Percentage of Total Skin-Related Visits)					
	Emergency Medicine	Family Practice	General Surgery	Internal Medicine	Otolaryngology	Pediatrics
1	Cellulitis/abscess (30.5)	Contact dermatitis (14.0)	Epidermoid cyst (18.8)	Cellulitis/abscess (16.0)	NMSC (17.8)	Contact dermatitis (20.6)
2	Contact dermatitis (19.4)	Cellulitis/abscess (12.1)	Varicose veins (10.1)	Contact dermatitis (15.6)	Epidermoid cyst (9.5)	Tinea (6.0)
3	Tinea (11.9)	Viral warts, NOS (5.1)	Cellulitis/abscess (9.2)	Rash (6.5)	Unspecified disorder of skin/soft tissue (7.6)	Rash (5.9)
4	Urticaria, NOS (8.8)	Tinea (4.8)	NMSC (7.6)	Herpes zoster without complication (5.5)	Contact dermatitis (6.0)	Insect bite (5.4)
5	Disturbance of skin sensation (6.8)	Rash (3.8)	Localized superficial swelling mass or lump (7.2)	Tinea (4.8)	Benign tumor (5.9)	Cellulitis/abscess (5.2)
6	Impetigo (6.7)	Benign tumor (3.6)	Unspecified disorder of skin/soft tissue (6.6)	Epidermoid cyst (3.1)	Other specified hypertrophic/atrophic conditions of skin (5.7)	Viral warts, NOS (4.7)
7	Rash (3.2)	Unspecified disorder of skin/soft tissue (3.6)	Pilonidal cyst (6.3)	Viral warts, NOS (2.5)	Cellulitis (4.8)	Impetigo (4.5)
8	Oral aphthae (3.0)	Epidermoid cyst (3.6)	Ulcer (6.0)	Unspecified disorder of skin/soft tissue (2.3)	Acne (2.8)	Acne (4.1)
9	Insect bite (3.0)	Herpes zoster without complication (3.0)	Benign tumor (5.4)	Ingrown nail (1.9)	Tinea (2.5)	Viral exanthem (3.4)
10	Carbuncle/furuncle (2.3)	Candida (2.4)	Melanoma (3.2)	Actinic keratosis (1.6)	Scar conditions/fibrosis of skin (2.2)	Atopic dermatitis (3.1)
11	Dermatitis from drug/medicine taken internally (2.3)	NMSC (2.2)	Viral warts, NOS (2.7)	Other specified disease of hair/hair follicles (1.3)	Keloid scar (2.2)	Candida (3.1)
12	Hordeolum (1.4)	Actinic keratosis (2.2)	Hidradenitis (2.0)	Benign tumor (1.3)	Actinic keratosis (1.9)	Urticaria, NOS (2.1)

Condition (Percentage of Total Skin-Related Visits)

Rank	Emergency Medicine	Family Practice	General Surgery	Internal Medicine	Otolaryngology	Pediatrics
13	Pilonidal cyst (0.8)	Ingrown nail (1.9)	Unspecified local infection of skin/subcutaneous tissue (1.1)	Impetigo (1.2)	Rosacea (1.9)	Molluscum contagiosum (1.8)
14	N/A	Insect bite (1.9)	Other specific disorder of skin (1.1)	Herpes simplex without complications (1.2)	Candida (1.7)	Seborrheic dermatitis (1.7)
15	N/A	Urticaria, NOS (1.5)	Neoplasm of uncertain behavior in skin (0.9)	Psoriasis (1.2)	Localized superficial swelling mass or lump (1.5)	Hordeolum (1.6)
16	N/A	Herpes simplex without complications (1.4)	Seborrheic keratosis (0.8)	Insect bite (1.2)	Dermatitis from food (1.5)	Scabies (1.4)
17	N/A	Other specified disease of hair/hair follicles (1.3)	Unspecified hypertrophic/atrophic conditions of skin (0.8)	Unspecified pruritic disorder (1.1)	Hemangioma (1.5)	Other specific diseases of hair/hair follicles (1.1)
18	N/A	Unspecified hypertrophic/atrophic conditions of skin (1.3)	Keratoderma (0.7)	Unspecified local infection of skin/subcutaneous tissue (1.1)	Benign neoplasm of lymph node (1.1)	Varicella without complications (1.0)
19	N/A	Seborrheic keratosis (1.1)	Actinic keratosis (0.7)	Dermatitis due to drugs/medicine taken internally (1.0)	Other specified dermatoses (1.1)	Herpes simplex without complications (0.9)
20	N/A	Unspecified local infection of skin/subcutaneous tissue (0.9)	Unspecified erythematous condition (0.6)	Urticaria, NOS (0.9)	Lichenification and lichen simplex chronicus (1.1)	Ingrown nail (0.9)

Abbreviations: NMSC, nonmelanoma skin cancer; NOS, not otherwise specified; N/A, not applicable.
^aData from the National Ambulatory Medical Care Survey.

(ie, billions of office visits) prevents verification of diagnostic accuracy. The coding system requires physicians to give a diagnosis but does not provide any means by which to determine the physician's confidence in that diagnosis. There is no code for "uncertain" or "diagnosis not determined." Additionally, an "unspecified" diagnosis may reflect uncertainty or may simply imply that no other code accurately described the condition. Despite these limitations, the NAMCS database is a large, nationally representative survey of actual patient visits and represents some of the best data available for a study such as ours.

Conclusion

This study provides an important analysis of the most common outpatient dermatologic conditions encountered by dermatologists and nondermatologists of various specialties and offers a foundation from which to construct curricula for dermatology training tailored to individual specialties based on their needs. In the future, identification of the most common inpatient dermatologic conditions managed by each specialty also may benefit curriculum design.

REFERENCES

1. Thorpe KE, Florence CS, Joski P. Which medical conditions account for the rise in health care spending? *Health Aff (Millwood)*. 2004;(suppl web exclusives):W4-437-445.
2. Johnson ML. Defining the burden of skin disease in the United States—a historical perspective. *J Invest Dermatol Symp Proc*. 2004;9:108-110.
3. Agency for Healthcare Research and Quality. Medical expenditure panel survey. US Department of Health & Human Services Web site. <http://mepsahrq.gov>. Accessed November 17, 2014.
4. Bickers DR, Lim HW, Margolis D, et al. The burden of skin diseases: 2004 a joint project of the American Academy of Dermatology Association and the Society for Investigative Dermatology. *J Am Acad Dermatol*. 2006;55:490-500.
5. Johnson ML. On teaching dermatology to nondermatologists. *Arch Dermatol*. 1994;130:850-852.
6. Ramsay DL, Weary PE. Primary care in dermatology: whose role should it be? *J Am Acad Dermatol*. 1996;35:1005-1008.
7. Kimball AB, Resneck JS Jr. The US dermatology workforce: a specialty remains in shortage. *J Am Acad Dermatol*. 2008;59:741-745.
8. Resneck JS Jr, Kimball AB. Who else is providing care in dermatology practices? trends in the use of nonphysician clinicians. *J Am Acad Dermatol*. 2008;58:211-216.
9. Feldman SR, Fleischer AB Jr, McConnell RC. Most common dermatologic problems identified by internists, 1990-1994. *Arch Intern Med*. 1998;158:726-730.
10. Ahn CS, Davis SA, Debad TS, et al. Noncosmetic skin-related procedures performed in the United States: an analysis of national ambulatory medical care survey data from 1995 to 2010. *Dermatol Surg*. 2013;39:1912-1921.
11. Antic M, Conen D, Itin PH. Teaching effects of dermatological consultations on nondermatologists in the field of internal medicine. a study of 1290 inpatients. *Dermatology*. 2004;208:32-37.
12. Federman DG, Concato J, Kirsner RS. Comparison of dermatologic diagnoses by primary care practitioners and dermatologists. a review of the literature. *Arch Fam Med*. 1999;8:170-172.
13. Fleischer AB Jr, Herbert CR, Feldman SR, et al. Diagnosis of skin disease by nondermatologists. *Am J Manag Care*. 2000;6:1149-1156.
14. Kirsner RS, Federman DG. Lack of correlation between internists' ability in dermatology and their patterns of treating patients with skin disease. *Arch Dermatol*. 1996;132:1043-1046.
15. McCarthy GM, Lamb GC, Russell TJ, et al. Primary care-based dermatology practice: internists need more training. *J Gen Intern Med*. 1991;6:52-56.
16. Sellheyer K, Bergfeld WF. A retrospective biopsy study of the clinical diagnostic accuracy of common skin diseases by different specialties compared with dermatology. *J Am Acad Dermatol*. 2005;52:823-830.
17. Medical specialties. Accreditation Council for Graduate Medical Education Web site. <http://www.acgme.org/acgmeweb/tabid/368ProgramandInstitutionalGuidelines/MedicalAccreditation.aspx>. Accessed November 17, 2014.
18. McCleskey PE, Gilson RT, DeVillez RL. Medical student core curriculum in dermatology survey. *J Am Acad Dermatol*. 2009;61:30-35.
19. Hansra NK, O'Sullivan P, Chen CL, et al. Medical school dermatology curriculum: are we adequately preparing primary care physicians? *J Am Acad Dermatol*. 2009;61:23-29.

QUICK POLL QUESTION



Which dermatologic condition do you encounter the most?

- | | | |
|----------------------|-----------------------|----------------------------|
| a. acne | c. benign tumor | e. nonmelanoma skin cancer |
| b. actinic keratosis | d. contact dermatitis | |

Go to www.cutis.com to answer our Quick Poll Question and see how your peers have responded