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### Psoriasis: Knowledge, attitudes and perceptions among primary care providers



*To the Editor:* Psoriasis is often undertreated, despite the availability of effective therapies.<sup>1</sup> In 1 survey, 59% of 1.7 million insured patients with moderate to severe psoriasis were untreated in the prior year.<sup>2</sup> In another study of patients with a sole diagnosis of psoriasis, fewer than 60% had seen a health care provider in the past year.<sup>3</sup> Psoriasis is commonly initially managed by primary care with referral to dermatology subsequently occurring.<sup>1</sup> This study aimed to explore primary care providers' (PCPs') perceptions, practice, and referral patterns when managing psoriasis to determine where barriers to treatment might occur. PCPs included physicians, residents, and advanced practice professionals. Topics assessed included perceptions about psoriasis, perceptions about the patients with psoriasis, challenges in psoriasis assessment and management, obstacles in referrals to specialists, and knowledge and training on psoriasis.

Paper and electronic surveys, administered via the Research Electronic Data Capture (REDCap) application, were used. Survey links were e-mailed to internal medicine trainees at Brigham and Women's Hospital between January and March 2018. Paper surveys were distributed at 2 continuing education conferences held between October 2017 and March 2018, and data were entered into REDCap.

Tables I and II summarize participant characteristics and results, respectively. The majority of PCPs recognize that psoriasis is difficult to treat (80.9%) and affects quality of life (63.3%) and that patients usually comply with the treatment plan (68%). Perceived reasons for noncompliance included cost, patients' beliefs that treatment is ineffective, and difficulty using medications.

**Table I.** Demographics of primary care providers (n = 147)

Variable	Providers, n (%)	Subsets (n)
<b>Educational background</b>		
P	82 (55.8)	MD (77), DO (5)
R	20 (13.6)	MD
A	45 (30.6)	NP (43), PA (2)
<b>Specialty</b>		
Internal medicine	90 (61.2)	P (52), R (19), A (19)
Family practice	38 (25.8)	P (21), R (0), A (17)
Other*	19 (12.9)	
<b>Years in practice</b>		
>15	107 (72.8)	P (75), R (0), A (32)
5-10	10 (6.8)	P (6), R (0), A (4)
1-5	10 (6.8)	P (1), R (0), A (9)
Current resident or fellow	20 (13.6)	NA
<b>Practice setting</b>		
Academic institution	33 (22.3)	P (11), R (19), A (3)
Academic-affiliated institution	28 (18.9)	P (15), R (1), A (12)
Private practice	50 (34.0)	P (35), R (0), A (15)
Community health center	12 (8.1)	P (5), R (1), A (6)
Urban	15 (10.1)	P (10), R (2), A (3)
Suburban	26 (17.6)	P (17), R (0), A (9)
Rural	4 (2.7)	P (1), R (0), A (3)
Other	10 (6.8)	P (3), R (1), A (6)
<b>Number of psoriasis patients seen per week</b>		
None	36 (24.5)	P (14), R (13), A (9)
1-2	95 (64.6)	P (60), R (7), A (28)
2-5	11 (7.5)	P (7), R (0), A (4)
>5	2 (1.4)	P (0), R (1), A (1)
<b>Frequency of new diagnosis of psoriasis made</b>		
Never	12 (8.2)	P (1), R (7), A (4)
Rarely	76 (51.7)	P (45), R (11), A (20)
Sometimes	51 (34.7)	P (31), R (2), A (18)
Frequently	7 (4.8)	P (5), R (1), A (1)

APP, Advanced practice professional; DO, doctor of osteopathy; MD, doctor of medicine; NA, not applicable; NP, nurse practitioner; P, physician; PA, physician assistant; R, resident physician.

\*Other includes obstetrics/gynecology: P (3), A (1); rheumatology: P (1), R (1); pediatrics: P (2); geriatrics: P (2); primary care, cardiology: A (2); adult NP: A (4); vascular surgery: A (1); ophthalmology, A (1); and not specified, A (1).

The majority (66.2%) of providers reported hesitation prescribing high-potency topical corticosteroids, especially in large quantities, given concerns regarding adverse effects. However, few (11.4%) used phototherapy, and the majority (93.7%) were

**Table II.** Results

Characteristic	MD/DO	R	NP/PA
PCP perceptions about the psoriasis, %			
Not difficult to treat	11	5	7
Somewhat difficult to treat	59	70	71
Difficult to treat	19	25	9
Very difficult to treat	2	0	7
Purely cosmetic disease	1	0	0
Life-threatening disease	1	5	0
Disease that causes only minor nuisances for patients	2	5	0
Disease with serious comorbidities/complications	59	75	36
Disease with significant impact on quality of life	51	85	73
PCP perceptions about the patient's adherence to treatment, %			
Noncompliant because of cost of medications/treatment	46	15	44
Noncompliant because patient believes treatment is not effective	38	25	44
Noncompliant because of difficulty using prescribed treatments	24	30	11
Noncompliant because patient not interested in treatment	15	10	7
Noncompliant for other reasons	6	0	7
Challenges in the assessment and management of psoriasis, %			
Do not feel comfortable prescribing systemic agents for psoriasis	89	90	93
Lack of knowledge or experience with systemic medications	74	95	73
Hesitate to prescribe high-potency topical steroids or large quantities	60	70	62
Worried about adverse effects of systemic medications	50	45	36
Do not know when systemic medications are appropriate	40	70	31
Administrative burden is high with prior authorization	30	40	36
Too much time involved with follow-up and laboratory test monitoring	22	25	11
Problems faced when referring patients to a dermatology specialist, %			
The wait to see a dermatologist is too long	72	60	71
Dermatologists do not communicate with me after I refer patients	28	10	24
Patients do not want to go for referral	16	5	16
Patients do not get better after referral to dermatology	11	0	16
There are no available dermatology providers in our area	7	10	11

DO, Doctor of osteopathy; MD, doctor of medicine; NP, nurse practitioner; PA, physician assistant; PCP, primary care physician; R, resident physician.

uncomfortable prescribing systemic agents. When referring patients, the most frequent problem was wait time to see a dermatology specialist (81.7%), followed by lack of postreferral communication (29.4%).

Surveyed practitioners had varying degrees of psoriasis-specific training; the majority reported 1 to 5 hours (52.9%). Respondents were interested in dedicated training on psoriasis management (71.1%). Topics of interest included the use of topical corticosteroids, use of systemic therapies, and noncutaneous comorbidities. The majority (69.4%) would prefer in-person lectures by dermatologists.

Limitations of our study include the inherent subjectivity of surveys and that it was conducted in a single geographic area with a high density of dermatologists and academic centers and may not be generalizable.

Despite the finding that the majority of PCPs recognize that psoriasis is difficult to treat and affects quality of life, more than 85% of PCPs reported never using nontopical treatment for psoriasis. This echoes the results of another study in which the majority (64.9%) of patients were treated only with topical therapy.<sup>4</sup> Furthermore, concerns about the wait time to see a dermatology specialist and postreferral communication may affect how frequently PCPs refer to dermatology. Our findings highlight the need to focus on therapies and noncutaneous comorbidities when formulating teaching curricula for PCPs, which may, in turn, allow them to counsel and refer patients expeditiously. Furthermore, digital interventions may be an important avenue for interfacing with PCPs, especially when dermatologists are in short supply.<sup>5</sup>

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## Assessment of the accessibility and content of dermatology fellowship websites



**To the Editor:** Previous studies that have assessed the effect of residency program websites on applicant decision making have shown that websites play a heavy factor in influencing an applicant's decision in choosing residency programs.<sup>1,2</sup> Regarding dermatology fellowship programs, to our knowledge no studies have evaluated the content of the programs' websites. The purpose of this study is to evaluate and compare the differences among accessibility and content across the dermatology fellowship websites.

A list of accredited dermatopathology, micrographic surgery and dermatologic oncology, and pediatric dermatology fellowship programs in the United States was generated with the Accreditation Council for Graduate Medical Education directory and the American Board of Dermatology Approved Pediatric Dermatology Fellowship directory as of October 2019. In accordance with previous residency applicant survey studies and fellowship website studies, certain information from the fellowship websites was collected and assessed for 3 major domains: program overview, the application process/recruitment, and education.<sup>1,3,4</sup> Programs' contact information from the websites were cross-referenced with Accreditation Council for Graduate Medical Education and American Board of Dermatology directories. Websites with 70% or more of desired information were defined as "superior websites" for the purpose of this study.

Fifty-four dermatopathology, 64 micrographic surgery and dermatologic oncology, and 29 pediatric dermatology fellowships were included for the analysis (Table 1). A total of 94.6% of websites' home pages were readily accessible within 1 click using Google Search. Micrographic surgery and dermatologic oncology fellowship websites had the least consistencies with the fellowship directories regarding telephone number, e-mail addresses, physical address, and program director's name compared with dermatopathology and pediatric dermatology fellowship websites ( $P < .001$ ). Micrographic surgery and dermatologic oncology websites (45%) also provided less program overview content than dermatopathology websites (58%) and pediatric dermatology websites (55%;  $P < .001$ ). Overall, dermatopathology websites provided the most program application/recruitment content (52%) compared with micrographic surgery and dermatologic oncology websites (26%) and pediatric dermatology websites (29%;  $P < .001$ ). Regarding the