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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 progrms.[1,2] 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.[1,3,4] 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 I). 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

Table I. Program website information available on the fellowship program websites

Program website detail	No. of DP websites (n, %), N = 54	No. of MSDO websites (n, %), N = 64	No. of PD websites (n, %) N = 29	χ^2/Fisher's exact test tables, *P* value			
				Overall	DP vs MSDO	DP vs PD	MSDO vs PD
Home page website accessibility within 1 click from Google Search (%)	53 (98.1)	59 (92.2)	27 (93.1)	.49	.59	>.99	.28
Program overview domain (%)							
Program description	54 (100)	60 (94)	29 (100)	.07	>.99	NA	>.99
Telephone number*	41 (76)	29 (45)	18 (62)	.003	.001	.18	.15
E-mail address*	46 (85)	16 (25)	24 (83)	<.001	<.001	.76	<.001
Address*	42 (78)	37 (58)	17 (59)	.05	.013	.07	.80
Program director's name*	48 (89)	49 (77)	29 (100)	.008	.06	.09	.002
Names of current fellows	14 (26)	23 (36)	7 (24)	.37	.18	.13	.20
Names of past fellows	4 (7)	16 (25)	4 (14)	.03	.04	>.99	.39
Past fellows' current employer	3 (6)	2 (3)	0	.41	.66	.55	>.99
% of domain by subspecialty	58	45	55	<.001	<.001	.43	.013
Application/recruitment domain (%)							
Application ID/form	33 (61)	4 (6)	3 (10)	<.001	<.001	<.001	.68
Salary information	13 (24)	13 (20)	6 (21)	.88	.72	.73	.95
Additional requirements/documents	34 (63)	19 (31)	18 (62)	<.001	.001	.94	.005
Application deadline	33 (61)	31 (48)	7 (24)	.006	.103	.001	.048
% of domain by subspecialty	52	26	29	<.001	.001	<.001	.53
Education domain (%)							
Didactics	38 (70)	25 (39)	23 (79)	<.001	.002	.38	.001
Journal club	20 (37)	27 (42)	10 (34)	.74	.43	.58	.38
Rotation schedule	26 (48)	14 (22)	12 (41)	.009	.005	.001	.07
Clinic/office responsibilities	39 (72)	22 (34)	24 (83)	<.001	<.001	.29	<.001
Research requirement/opportunities (%)	43 (80)	25 (39)	24 (83)	<.001	<.001	.46	<.001
Previous research	4 (7)	2 (3)	0	.23	.42	.65	>.99
Conferences/meetings	35 (65)	25 (39)	19 (66)	.007	.011	.95	.03
International opportunities	1 (2)	13 (20)	1 (3)	<.001	.002	>.99	.008
% of domain by subspecialty	48	30	49	<.001	<.001	.80	<.001
Superior websites† (%)	10 (19)	3 (5)	4 (14)	.06	.02	.58	.12
% of all domains by subspecialty	53	35	47	<.001	<.001	.03	<.001

$P < .05$ is considered statistically significant.

DP, Dermatopathology; *ID*, identification; *MSDO*, micrographic surgery and dermatologic oncology; *NA*, not available; *PD*, pediatric dermatology.

*This information was cross-referenced with the directories of the Accreditation Council of Graduate Medical Education and American Board of Dermatology.

†Superior websites are defined as those containing greater than 70% of evaluated information.

education domain, micrographic surgery and dermatologic oncology websites (30%) displayed the least amount of education content compared with dermatopathology websites (48%) and pediatric dermatology websites (49%; $P < .001$). On average, dermatopathology, micrographic surgery and dermatologic oncology, and pediatric dermatology websites provided 51%, 32%, and 42% of the evaluated information, respectively, but there were no significant differences among fellowship types with websites containing a superior amount (>70%) of content. After assessment of all domains, micrographic surgery and dermatologic oncology websites (35%) provided the least amount of website content for future applicants compared with dermatopathology websites (53%) and pediatric dermatology websites (47%; $P < .001$) (Table I).

In conclusion, our study shows that although dermatology fellowship websites are accessible, most provide applicants with incomplete information.

The current study has some limitations because it did not assess the effect of website content and accessibility of other fellowships, such as cosmetic dermatology. Additionally, this was a cross-sectional study conducted at a specific time. There remains a paucity in the content of dermatopathology, micrographic surgery and dermatologic oncology, and pediatric dermatology fellowship websites. Few programs had greater than 70% of the information

evaluated that would be crucial to applicant decision making.[1] We recommend that fellowship programs update their websites because providing more information is critical to improving the recruitment of candidates to their programs, and we hope that this study may serve as a guide for website updating.

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Isotretinoin and iPledge Program patient information video: A new modality that improves patient comprehension

To the Editor: Evidence confirms the lack of readability and comprehension of the current iPledge Program patient educational materials.[1] Today, because patients obtain much of their information online and through popular websites or social media, it is important to provide them with quality information via these platforms. Unfortunately, there is a diverse range of quality in the currently available online resources. This was highlighted by a recent study by Xiang et al[2] that evaluated the top 50 most-viewed isotretinoin YouTube videos and graded each video across 5 categories.[2] The majority of these videos had fair- to poor-quality medical information.[2] We performed a quality improvement study assessing the benefit of using a physician-directed educational video to improve isotretinoin patient comprehension. This intervention is efficient and provides an easy method to provide detailed patient educational information in an office setting, which is replicable and could be generalized across academic and community dermatology practices.

The study commenced after the University of California San Diego's institutional review board exemption on January 28, 2019 (protocol no. 182107). Patients 15 years of age and older were enrolled at the time of iPledge Program registration by board-certified dermatologists. The dermatologists who were not involved in the creation of this video or this publication provided standard verbal counseling, and 1 of the authors (AM) administered video-based education to patients who did not have any interaction with the physician in the video (available at https://www.youtube.com/watch?v=kGL77TPrJOU&t=). Before the delivery of traditional or video-based counseling, each participant was informed that he or she would receive a post-counseling survey. The survey included 10 comprehension questions in addition to questions regarding demographics, level of education, preferred learning style, and personal rating of perceived level of comprehension (Supplemental Materials; available via Mendeley at https://doi.org/10.17632/tkzfbvh4j5.1). This survey was developed with the aid of a focus group composed of adult and pediatric dermatologists and a patient with severe acne. Surveys were administered from November 2019 through March 2020. Data were imported into an Excel (Microsoft, Redmond, WA) file and analyzed in April 2020.

This study included 25 patients aged 15 to 32 years (mean age of 23 years), 11 males and 14 females. The average highest level of education for the participants was a college degree. Eleven patients received traditional counseling, and 14 patients received video-based counseling (Table I). A student t test showed a statistically significant difference ($P < .0001$) in the two groups, and demonstrated superiority of the video-based educational intervention (Table II).