

### Factors associated with follow-up adherence in patients seen at a referral-based dermatology clinic for the homeless



*To the Editor:* Skin disease is prevalent in homeless populations and contributes to significant morbidity.<sup>1-3</sup> Data are lacking on the unique factors that influence successful continuity of dermatologic care for homeless persons. To identify demographic and clinical factors associated with loss to follow-up, we performed a retrospective analysis of patients seen between May 2009 and July 2017 at a referral-based dermatology clinic for homeless individuals (University of Utah institutional review board number 00096567). The clinic is located in Salt Lake City, Utah, a large urban center in a rural state, and it provides free medical care specifically for the homeless population. Dermatologists volunteer in twice-monthly clinics after referral from primary care providers.

Medical data from patients 18 years and older were obtained from electronic health records (EHRs)

and included demographics, diagnostic information, treatment, recommendations, follow-up information, and comorbidities. Demographics were compared by sex by using *t* tests for continuous variables and chi-square tests for nominal variables. Generalized estimated equations with exchangeable covariance structure were used to determine variables associated with follow-up. SAS, version 9.4 (Cary, NC), was used for all analyses.

During the study period, 141 dermatology clinics were held during the study period serving a total of 507 individuals. The average age at first visit was 48.9 years, and 73% identified as white. There were more men (68.8%), and men were more likely to be older at first visit than women ( $P < .001$ ). Most patients (86.2%) had a Charlson Comorbidity Index (CCI) of 1 or less; however, 66.9% had at least 1 mental health diagnosis; these rates were higher in women ( $P = .048$ ) (Table I). Benign conditions (42.6%) and dermatitis/psoriasis (26.6%) were most commonly diagnosed. Infectious ( $P = .002$ ) and premalignant/malignant ( $P = .03$ ) skin diagnoses were more

**Table I.** Demographic and clinical characteristics of patients, overall and by sex, at a dermatology clinic for homeless individuals in Salt Lake City, Utah

Characteristics	Total	Female	Male	P value
Patients, N	507	158	349	
Age first visit, y, mean (SD)	48.9 (10.5)	46.0 (10.6)	50.2 (10.1)	<.001*
Number of diagnoses per patient, mean (SD)	2.0 (1.5)	.8 (1.2)	2.0 (1.6)	.13
Number of clinic visits per patient, mean (SD)	1.2 (0.6)	1.2 (0.6)	1.2 (0.7)	.61
Race, n (%)				.74
White	370 (73.0)	111 (70.3)	259 (74.2)	
Hispanic or Latino/a	68 (13.4)	25 (15.8)	43 (12.3)	
Black/African American	37 (7.3)	12 (7.6)	25 (7.2)	
Other	32 (6.3)	10 (6.3)	22 (6.3)	
Charlson Comorbidity Index, n (%)				.39
0	306 (60.4)	87 (55.1)	219 (62.8)	
1	131 (25.8)	45 (28.5)	86 (24.6)	
2	32 (6.3)	14 (8.9)	18 (5.2)	
3	24 (4.7)	8 (5.1)	16 (4.6)	
4+	14 (2.8)	4 (2.5)	10 (2.9)	
Number of mental health diagnoses, n (%)				.048*
0	168 (33.1)	43 (27.2)	125 (35.8)	
1	146 (28.8)	47 (29.7)	99 (28.4)	
2	98 (19.3)	27 (17.1)	71 (20.3)	
3	68 (13.4)	30 (19.0)	38 (10.9)	
4+	27 (5.3)	11 (7.0)	16 (4.6)	
Dermatologic diagnosis category, n (%)				
Benign	216 (42.6)	74 (46.8)	142 (40.7)	.20
Dermatitis/psoriasis	135 (26.6)	37 (23.4)	98 (28.1)	.27
Infection	110 (21.7)	21 (13.3)	89 (25.5)	.002*
Premalignant/malignant	104 (20.5)	23 (14.6)	81 (23.2)	.03*
Acne/rosacea	38 (7.5)	19 (12.0)	19 (5.4)	.009*
Other	143 (28.2)	46 (29.1)	97 (27.8)	.76

SD, Standard deviation.

\* $P < .05$ .

**Table II.** Comparison of variables between patients who did and did not follow up among patients for whom follow-up was recommended (n = 246)

Variable	Patient followed up?		P value
	No (n = 96)	Yes (n = 150)	
Age, y, mean (SD)	47.6 (11.0)	50.3 (9.2)	.03*
Number of diagnoses per visit, mean (SD)	1.8 (1.4)	2.5 (2.1)	.03*
Sex, n (%)			
Male	48 (57.1)	104 (78.8)	.001*
Female	36 (42.9)	28 (21.2)	
Race, n (%)			.17
White	64 (76.2)	105 (79.5)	
Hispanic or Latino/a	12 (14.3)	15 (11.4)	
Black/African American	2 (2.4)	9 (6.8)	
Other	6 (7.1)	3 (2.3)	
Charlson Comorbidity Index, n (%)			.76
0	50 (59.5)	78 (59.1)	
1	21 (25.0)	36 (27.3)	
2	5 (6.0)	10 (7.6)	
3	5 (6.0)	4 (3.0)	
4+	3 (3.6)	4 (3.0)	
Number of mental health diagnoses, n (%)			.02*
0	27 (32.1)	55 (41.7)	
1	18 (21.4)	44 (33.3)	
2+	39 (46.4)	33 (25.0)	
Dermatology diagnosis category, n (%)			
Benign	31 (32.3)	62 (41.3)	.15
Dermatitis/psoriasis	29 (30.2)	40 (26.7)	.55
Infection	18 (18.8)	37 (24.7)	.28
Premalignant/malignant	28 (29.2)	65 (43.3)	.03*
Acne/rosacea	13 (13.5)	19 (12.7)	.84
Other	26 (27.1)	42 (28.0)	.88
In-clinic procedure, n (%)			.001*
Yes	34 (35.4)	85 (56.7)	
No	62 (64.6)	65 (43.3)	
Prescribed medication, n (%)			.30
Yes	57 (59.4)	79 (52.7)	
No	39 (40.6)	71 (47.3)	
Recommended follow-up time interval, mo, n (%)			.001*
≤1	30 (33.0)	80 (55.2)	
>1 to 6	45 (49.5)	53 (36.6)	
>6	16 (17.6)	12 (8.3)	

SD, Standard deviation.

\* $P < .05$ .

commonly diagnosed in men, whereas acne/rosacea ( $P = .009$ ) was more commonly diagnosed in women.

The average time to first follow-up was 1 year. Of the 246 patients for which follow-up was recommended, 49.6% followed up as recommended. Patient demographics associated with increased follow-up adherence included older age ( $P = .03$ ), male sex ( $P = .001$ ), more skin diagnoses ( $P = .03$ ), premalignant/malignant diagnoses ( $P = .03$ ), in-clinic procedure ( $P = .001$ ), shorter recommended follow-up intervals ( $P = .001$ ), and fewer mental

health diagnoses ( $P = .02$ ) (Table II). Specifically, those diagnosed with personality disorders were associated with follow-up adherence ( $P = .003$ ), whereas those diagnosed with posttraumatic stress disorder were associated with decreased follow-up adherence ( $P = .01$ ). These findings can aid clinicians in altering recommendations or identifying patients who may be at risk for potential nonadherence.

Given the transience of homeless populations, commitments to follow-up care is understandably difficult. Although our patient population is largely physically healthy as measured by the CCI, the

mental health burden of homeless US adults is 46%, which is greater than the national average of 18.5% for the general US population.<sup>4,5</sup> The correlations between mental health diagnoses and likelihood of following up points to the compounded difficulty of patient adherence when grappling with psychiatric disease.

Although this study has several limitations, including limited sample size, EHR accuracy, and generalizability to the US homeless population, our results aim to better inform dermatology clinicians on the management of this unique and vulnerable population. Future studies should characterize barriers to dermatologic care for homeless persons to develop effective interventions and treatment strategies.

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## Impostor syndrome in United States dermatology residents



*To the Editor:* Psychologists first described impostor syndrome (IS) in 1978 in women who, despite having outstanding academic and professional accomplishments, experienced persistent feelings of self-doubt and were skeptical of their success.<sup>1</sup> People with characteristics of IS fear being exposed as frauds and doubt their talent and ability. IS has been recognized in the business and entertainment industries but is less studied in medicine. Studies involving medical students and primary care residents have linked IS to burnout and psychiatric comorbidities.<sup>2,3</sup> The prevalence of IS in dermatology residents is currently unknown but may be significant given the competitive nature of obtaining a residency position and the stressors of residency training. The objective of this study was to define the prevalence of IS in United States dermatology residents and to determine a possible association with physician burnout.

A cross-sectional survey study was conducted from May to June 2019. The survey was developed and managed in REDCap (Research Electronic Data Capture), a secure Web-based tool to capture electronic data for research. The survey included the Clance Impostor Phenomenon Scale (CIPS)<sup>4</sup> and the Maslach Burnout Inventory Human Services Survey for Medical Personnel (MBI-HSS [MP]),<sup>5</sup> as well as demographic characteristics, training year, and perceived program rank. A link to the anonymous survey was sent via LISTSERV (L-Soft International, Inc, Bethesda, MD) to members of the Association of Professors of Dermatology with a request to forward to residents. Data analysis, including Pearson correlations, Fisher exact test, regression, and descriptive statistics, was conducted in June 2019 using SAS 9.4 software (SAS Institute Inc, Cary, SC).