Dermatologic care of uninsured patients managed at free clinics

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Background: Uninsured patients are not well tracked within the health care system and therefore not commonly recorded in databases. Epidemiologic data regarding patients—specifically, those with dermatologic concerns visiting free clinics—are limited.

Objective: The purpose of this study was to explore the prevalence of dermatologic complaints among uninsured patients who visit free clinics.

Methods: A cross-sectional chart review of 5553 uninsured patients seen across 8 free clinics in Tampa, Florida, during 2016 was carried out to determine the prevalence of dermatologic chief complaints and patient demographics.

Results: Across 8 free clinics, a total of 5553 patients were seen in 2016. Of these patients, 444 (8%) presented with dermatologic complaints. The most common complaints pertained to rash, followed by lesions: localized rash (n = 83 [18.7%]), genital rash (n = 51 [11.5%]), generalized rash (n = 50 [11.3%]), questionable lesions (n = 35 [7.9%]), and genital lesions (n = 18 [4.1%]).

Limitations: There are notable variations in medical documentation practices among free clinics, thereby limiting data collection.

Conclusions: Free clinics have the potential to relieve a great dermatologic burden throughout the uninsured population. The findings from this study can inform other free clinics of the dermatologic conditions that are most likely to be seen among their patient population so that they can better provide their patients with higher-quality care. (J Am Acad Dermatol 2019;81:433-7.)

Key words: demographics; free clinics; general dermatology; uninsured.

Free clinics provide patients with health care that they may not be able to receive elsewhere, primarily because of a lack of insurance.[1] Because the majority of clinics operate similarly to a family medicine practice, it is difficult to stratify treated patients by specific specialty. As such, there are limited epidemiologic data on dermatologic patients visiting free clinics.[2] Furthermore, uninsured patients are not well tracked in the health care system and therefore not commonly recorded in databases, further limiting analysis of this patient population.

A retrospective chart review of free clinic patients seen between October 2013 and April 2015 found that most patients (31.1%) wait between 1 and 4 weeks to be seen for a dermatologic complaint, with 22.2% of patients waiting between 1 and 3 months.[3] Longer wait times may put patients at increased risk for more severe disease and mortality, particularly those with evolving or growing lesions.

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Adults with long-term lack of health insurance reported higher rates of unmet health care needs than their insured counterparts, with uninsured patients more likely to miss their routine checkups (42.8%) than insured patients (17.8%).[4] Part of these routine checkups included skin cancer screening, which is particularly important in patients who may be at higher risk of skin cancer due to genetics, inborn errors in metabolism, and excessive sun exposure.

To improve dermatologic care provided at free clinics, it is necessary to understand the prevalence of frequently reported chief complaints. Free clinics often have limited access to dermatologists, so patients with dermatologic complaints are seen by whichever provider happens to be in the clinic at the time of their visit. Knowledge of dermatologic diseases among free clinic family medicine physicians is often limited to the most common conditions. Therefore, the ultimate goal of this research study was to describe demographic characteristics and chief dermatologic complaints associated with uninsured patients seeking care at free clinics.

CAPSULE SUMMARY

- This article integrates into what is already known by helping free clinics incorporate treatment standards already practiced in dermatology clinics.
- Free clinics can be made aware of the uninsured dermatologic patients they are most likely to see so that they can provide patients with higher-quality dermatology management.

METHODS

Study design and sample

This cross-sectional study reviewed patient records from free clinic visits during 2016. A chart review of uninsured patients (N = 5553) was carried out across 8 free clinics in Tampa, Florida, between January 2016 and December 2016 to determine the prevalence of dermatologic disease and treatment as related to patient demographics.

The patients included were those seen for the first time during the study period. Previously established patients who had been seen at a free clinic before this time period were excluded. Those who had multiple visits during 2016, including their first visit to the clinic, were recorded under the same patient identifier to prevent duplication of demographic and chronic disease data.

Data collected consisted of patient demographics (ie, sex, race, ethnicity, income level), chief complaint, chronic conditions, and medications, among others. For reporting and analyses, races with small sample sizes (Pacific Islander, Native American/Alaskan Native, and those reporting multiple races) were combined into the single category "other race." Patients with dermatologic chief complaints were considered case patients and compared with controls, or patients seen at free clinics for nondermatologic complaints.

Statistical analysis

An adjusted ratio of visit rates for dermatology patients compared with controls was generated through negative binomial regression. Age-adjusted prevalence ratios (PRs) comparing demographic distributions between case patients and controls were generated by using log-binomial regression. Hypothesis testing of differences in age by patient type was performed by using the Mann-Whitney/Wilcoxon rank sum test with continuity correction. All statistical analyses were performed using R software (version 3.5.1).[5]

Results

Across 8 free clinics around Tampa, a total of 5553 patients were seen over 11,821 visits in 2016. The median age of all patients was 40 years. Of these patients, 944 (17.0%) identified primarily as white, 585 (10.5%) as African American, 120 (2.2%) as Asian, and 39 (0.7%) as being of various other races. The majority of patients in this study identified as Hispanic or Latino (n = 2192 [39.5%]), with 50 of these patients identifying as being of a nonwhite race. The remaining patients (n = 1673 [30.1%]) were of unknown or unreported race/ethnicity. The majority of patients were female (n = 3182 [57.3%]) with 39.9% (2218) being male and 2.8% (153) without their sex recorded. Among all patients, 1311 (23.6%) were employed, 1215 (21.9%) were unemployed, and 3026 (54.5%) were without known employment status. Only 466 patients (8.4%) identified as current smokers and 268 (4.8%) identified as previous smokers. Additionally, 466 patients (8.4%) identified as current alcohol consumers and 84 patients (1.5%) had a recorded history of alcohol consumption.

Of the 5553 patients, 444 (8.0%) were seen for dermatologic chief complaints over the course of 1340 visits. These case patients had a rate of 3.0 visits in 2016 compared with a rate of 2.1 visits for non−case patients, for a rate ratio of 1.43. After control for age, race/ethnicity, sex, and employment status, dermatology patients had an adjusted rate ratio of 1.42 visits (95% confidence interval [CI], 1.33-1.52) compared with the controls. The most common chief complaints at first-time dermatologic visits by these patients included localized rash

Abbreviations used:

CI: confidence interval
PR: prevalence ratio

(n = 83 [18.7%]), genital rash (n = 51 [11.5%]), generalized rash (n = 50 [11.3%]), questionable lesion (n = 35 [7.9%]), and genital lesion (n = 18 [4.1%]) (Table I). The prevalence of dermatologic complaints among patients across clinics ranged from 4.6% at a youth clinic to 16.4% at a homeless clinic. Additional demographics specific to the dermatologic patients and comparative PRs are summarized in Table II.

The median age of the dermatology patients was 39 years; there was no significant difference in age distribution between these patients and the nondermatology comparison group (2-sided Mann-Whitney/Wilcoxon test P = .742). Whites made up 21.6% of patients (n = 96), African Americans made up 6.1% (n = 27), and Asians made up 2.0% (n = 9). Of all the patients, 188 (42.3%) were identified as Hispanic or Latino. The remaining patients (n = 123 [27.8%]) were of unknown or unreported race/ethnicity. Of the dermatology patients seen, 187 (42.1%) were identified as male and 257 (57.9%) were identified as female. Of the 444 patients, 146 patients (32.9%) were employed, 117 (26.4%) were unemployed, and 181 (40.8%) were of unknown employment status. Fifty-six patients (12.6%) were identified as current tobacco smokers, and 19 were identified (4.3%) as past smokers; 60 patients (13.5%) were identified as current alcohol consumers, and 6 (1.4%) had a previous history of alcohol consumption. Age-adjusted PRs are presented by demographic group in Table II.

Among this patient population, the age-adjusted prevalence of dermatologic disorders was higher among whites than among those of any other race/ethnicity, though a significantly lower prevalence rate was documented only among those identifying as African American (PR, 0.43; 95% CI, 0.28-0.67). Dermatology case patients were significantly more likely to be current smokers (PR, 1.69; 95% CI, 1.30-2.20) and current alcohol consumers (PR, 1.71; 95% CI, 1.31-2.21) than were patients in the control group. Although the prevalence rate of dermatology disorders was slightly lower among the unemployed (0.88), this was not a statistically significant finding (95% CI, 0.69-1.11). No significant differences in sex were detected (PR, 0.96; 95% CI, 0.80-1.15).

Table I. Most common chief complaints among dermatology patients

Chief complaint	n	%
Total	444	
Miscellaneous	119	26.8
Localized rash	83	18.7
Genital rash	51	11.5
Generalized rash	50	11.3
Questionable lesion	35	7.9
Genital lesion	18	4.1
Alopecia	16	3.6
Onychomycosis	13	2.9
Acne	10	2.3
Suspicious mole	9	2.0
Cellulitis	8	1.8
Cyst	8	1.8
Herpes	8	1.8
Hives	8	1.8
Hyperpigmentation	8	1.8

DISCUSSION AND CONCLUSIONS

About 8% of patients seen at free clinics during 2016 presented with some sort of dermatologic chief complaint, with the most common being a localized rash, a genital rash, or a generalized rash. Less common visits involved questionable lesions, genital lesions, and others, as reported in Table I. Dermatology patients were seen at a rate that was around 40% higher than the rate for the comparison group, even after control for potential confounders Two of the clinics from the study had designated dermatology days on which appointments could be scheduled specifically for dermatologic concerns. This allowed patients with previously diagnosed skin conditions or malignancies to receive standard checkups and necessary cancer screenings with board-certified dermatologists as opposed to primary care providers. Without this limited focus on dermatologic concerns, patients may be more likely to neglect concerning skin changes, which may then lead to worse outcomes compared with those in patients who are routinely being screened.

Whites had the highest prevalence of dermatologic complaints in this study population. Buster et al noted that although dermatologic disorders such as skin cancer and atopic dermatitis disproportionately affect ethnic and racial minorities, white patients were the ones who were seen most often by dermatologists. They further suggested possible contributors to this observation, including lack of dermatology training with minority patients and disparities in research.[2] Besides provider-centered factors, there are also likely socioeconomic barriers

Table II. Patient demographics and prevalence ratios

Demographic	Patient population, n (N = 5553)*	Dermatology patients, n (%) (n = 444)*	Prevalence ratio† (95% confidence interval)
Race/ethnicity			
White‡	944	96 (10.2)	
African American	585	27 (4.6)	0.43 (0.28-0.67)
Asian	120	9 (7.5)	0.74 (0.38-1.45)
Other race	39	1 (2.6)	0.18 (0.03-1.34)
Hispanic/Latino	2192	188 (8.6)	0.85 (0.67-1.08)
Sex			
Male‡	2218	187 (8.4)	
Female	3182	257 (8.1)	0.96 (0.80-1.15)
Employment status			
Employed‡	1311	146 (11.1)	
Unemployed	1215	117 (9.6)	0.88 (0.69-1.11)
Smoking status			
Never‡	4819	369 (7.7)	
Past	268	19 (7.1)	0.96 (0.61-1.51)
Current	466	59 (12.7)	1.69 (1.30-2.20)
Alcohol consumption status			
Never‡	5003	378 (7.6)	
Past	84	6 (7.1)	0.95 (0.43-2.11)
Current	466	60 (12.9)	1.71 (1.31-2.21)

*Counts and frequencies of missing values are not shown.
†Prevalence ratios adjusted for age.
‡Reference group.

preventing minority patients from making dermatologic visits to health care providers. Although lack of insurance may be a sizeable barrier to health care access, disparities in dermatologic health exist even among low-income uninsured patients who are utilizing free clinics.

Free clinics have the potential to relieve a great dermatologic burden throughout the uninsured population by providing care to patients who may otherwise choose to ignore their symptoms. When uninsured patients are treated early on, the more detrimental stages of many skin lesions can be avoided altogether. Furthermore, the findings from this study can inform other free clinics of the dermatologic conditions that they may be most likely to see among their patient population. With awareness, free clinics can better provide patients with higher-quality dermatology diagnosis, treatment, management, and overall care.

Study limitations

Causal interpretations were not made in this analysis owing to the cross-sectional study design. The demographic factors presented in Table II are a mixture of risk factors, effect modifiers, and mediators; however, when the burden of dermatologic complaints was described by demographic strata, the only covariate controlled for was age.

Missing data are also an important limitation to this study. During data collection from various free clinics, it was noted that reporting practices varied depending on location. Some free clinics documented all patient demographic details, whereas others had limited records on account of their available time and resources. All available data were gathered, and missing demographic information was reported as undocumented for transparency.

Another limitation of this study was the lack of data regarding the final diagnoses. Most of the patient charts did not contain a final diagnosis; they included only a differential diagnosis list. Clinic providers treated patients on the basis of what was the most likely diagnosis and often asked the patient to monitor for improvement and return to the clinic in the event of worsening symptoms. Data on the documented needs of a dermatology consult were not gathered.

Moving forward, additional data collection and exploration on the documented needs of a dermatology consult would allow further analyses of clinical presentations that are more likely to be associated with morbidity. Furthermore, it would be useful to stratify patients according to the type of provider by which they were seen, particularly according to whether they were seen by a board-certified dermatologist, and explore

whether the type of provider that dermatology patients sees is related to how their follow-up care is managed.

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