history of depression taking antidepressants had lower cutaneous disease severity and better PROMs for certain indicators. This study suggests a critical role for antidepressants in the management of patients with psoriasis with depression—a possible cornerstone in treatment. As dermatologists, awareness of this association can promote more consistent and timely referrals to psychiatrists, allowing for personalized management to impact both skin disease and quality of life.

Limitations include the patient-reported nature of depression and selection bias (registry participation is voluntary). Further, those with depression not seeking treatment may not seek treatment for psoriasis either.

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Neda Shahriari, MD,[a] Tin-chi Lin, PhD, MS,[b] Heather J. Litman, PhD,[b] Blessing Dube, MPH,[b] Robert R. McLean, DSc, MPH,[b] and Mona Shahriari, MD[c,d]

From the Department of Dermatology, University of Connecticut, Farmington, Connecticut[a]; Corrona LLC, Waltham, Massachusetts[b]; the Department of Dermatology, Yale University, New Haven, Connecticut[c]; and Central Connecticut Dermatology, Cromwell, Connecticut.[d]

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Correspondence and reprint requests to: Mona Shahriari, MD, Central Connecticut Dermatology, 1 Willowbrook Rd, Ste #2, Cromwell, CT 06416

E-mail: shahriari@centralctderm.com

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Comparison of Medicare clinical activity among female and male dermatologists, 2012-2017

To the Editor: Clinical activity among physicians can be influenced by workplace opportunities, patient complexity, and physician preferences.[1,2] The relationship between sex and clinical activity among dermatologists remains uninvestigated and warrants assessment, given the increasing proportion of female dermatologists and the relationship between clinical activity and reimbursement.[3]

We performed a review of 2012-2017 Medicare Physician and Other Supplier Public Use Files to describe overall differences in volume of clinic visits, procedures, and unique beneficiaries among male and female dermatologists and subspecialists and to assess trends in these parameters. We also evaluated for sex differences in frequently billed services.

Among dermatologists who submitted Medicare claims from 2012 to 2017, male dermatologists demonstrated higher levels of activity parameters (all $P < .001$) (Table I). Male general dermatologists performed a greater number of destructions of actinic keratoses per beneficiary (1.96 vs 1.59; $P < .001$); however, female general dermatologists and Mohs surgeons more often engaged in 25-minute visits (0.44 vs 0.37; $P < .001$) (Table II).

Previous survey analyses have described fewer work hours among female dermatologists.[3] Although this study cannot correlate Medicare activity to work hours, 36% of female dermatologists report having their first child as an attending physician,[4] which may present competing time demands and inform clinical patterns. Alternatively, survey data suggest that female dermatologists are motivated by patient relationships (37%) as opposed

Table I. Comparison of Medicare clinic visits, procedures, and unique beneficiaries by dermatologist sex and subspecialty, 2012-2017

		Individual years: mean visits, procedures, or beneficiaries per dermatologist (SD)							All years		
Clinical activity measure	Derm. sex	2012	2013	2014	2015	2016	2017	Trend *P* value	Overall mean, 2012−2017 (SD)	Mean sex difference	Sex difference *P* value
General dermatologists, n = 43,084 total physicians* (20,838 [48.4%] men; 22,246 [51.6%] women)											
E&M outpatient clinic visits	Men	1118 (946)	1111 (937)	1098 (917)	1111 (919)	1134 (970)	1107 (941)	.92	1113 (938)	−372	<.001
	Women	707 (617)	722 (622)	725 (623)	743 (644)	770 (660)	765 (659)	<.001	741 (639)		
Procedures	Men	2943 (3750)	2948 (3750)	3012 (3927)	2956 (3732)	3048 (3958)	2975 (3993)	.41	2980 (3851)	−1292	<.001
	Women	1582 (1872)	1630 (2035)	1676 (2093)	1698 (2047)	1770 (2053)	1746 (2019)	<.001	1688 (2025)		
Unique beneficiaries	Men	730 (582)	730 (583)	725 (578)	732 (576)	740 (590)	726 (582)	.97	731 (582)	−239	<.001
	Women	463 (385)	476 (395)	483 (397)	495 (407)	515 (417)	512 (418)	<.001	492 (405)		
Mohs surgeons, n = 13,522 total physicians* (9636 [71.3%] men; 3886 [28.7%] women)											
E&M outpatient clinic visits	Men	1236 (1078)	1238 (1064)	1194 (1007)	1200 (1037)	1179 (1012)	1155 (988)	.002	1199 (1031)	−405	<.001
	Women	846 (790)	809 (763)	808 (839)	797 (773)	770 (720)	751 (703)	.009	794 (764)		
Procedures	Men	4816 (5030)	4874 (4986)	4846 (5059)	4802 (4844)	4831 (5052)	4688 (4774)	.46	4807 (4955)	−2144	<.001
	Women	2706 (3001)	2639 (2783)	2726 (2924)	2665 (2791)	2646 (2731)	2607 (2610)	.63	2663 (2798)		
Unique beneficiaries	Men	969 (784)	982 (778)	981 (770)	993 (777)	1010 (980)	986 (766)	.24	987 (814)	−376	<.001
	Women	602 (449)	612 (510)	613 (521)	615 (499)	607 (490)	618 (530)	.65	611 (501)		
Dermatopathologists, n = 9,461 total physicians* (5807 [61.4%] men; 3654 [38.6%] women)											
E&M outpatient clinic visits	Men	1266 (970)	1245 (964)	1281 (1008)	1301 (1040)	1330 (1051)	1324 (1030)	.14	1289 (1009)	−433	<.001
	Women	822 (670)	842 (712)	851 (719)	858 (704)	876 (721)	886 (714)	.09	856 (708)		
Procedures	Men	5008 (5211)	4965 (5156)	5215 (5379)	5291 (5765)	5363 (5622)	5363 (5241)	.03	5188 (5392)	−2147	<.001
	Women	2874 (3047)	2944 (2944)	2958 (2733)	3050 (2801)	3157 (3142)	3250 (3574)	.002	3041 (3053)		
Unique beneficiaries	Men	1126 (979)	1125 (1008)	1174 (1130)	1216 (1375)	1241 (1340)	1269 (1259)	.008	1187 (1182)	−331	<.001
	Women	769 (766)	806 (816)	843 (814)	859 (840)	890 (955)	963 (1323)	<.001	856 (941)		

Mean number of Medicare evaluation and management outpatient clinic visits (Healthcare Common Procedural Coding System codes 99201-99205 and 99211-99215), procedures, and unique beneficiaries among male and female dermatologists, stratified by subspecialty, between 2012 and 2017. Mohs surgeons included dermatologists performing at least 11 Mohs micrographic procedures (Healthcare Common Procedural Coding System codes 17311-17315), and dermatopathologists were defined as those performing at least 11 pathology examinations or staining procedures (Healthcare Common Procedural Coding System codes 88302, 88304-5, 88312-3, 88342, or 88346). Two sensitivity analyses were conducted: inclusion of general dermatologists according to various minimum evaluation and management outpatient clinic visit thresholds (eg, 51, 101, 201), and classification of subspecialists according to alternative minimum subspecialty-specific procedure thresholds (eg, 21, 51), neither of which appreciably affected the results. Overall mean sex differences in clinical activity parameters between men and women were determined from an unpaired *t* test, whereas a nonparametric test of trend was used to assess for changes in clinical activity parameters during the study period. Significance was defined as $P < .05$. Mean sex difference was calculated as mean value of male dermatologists minus mean value of female dermatologists, with negative differences indicating lower mean values for women compared with men.

Derm., Dermatologist; *E&M*, evaluation and management; *SD*, standard deviation.

*Total number of unique dermatologist-year combinations because a single dermatologist may have submitted Medicare claims in multiple study years.

Table II. Comparison of frequently billed Medicare services by dermatologist sex and subspecialty, 2017

HCPCS code	HCPCS description	Dermatologists billing for code, no. (%)	Mean clinic visits or procedures per beneficiary by dermatologist sex (SD)			
			Men	Women	Mean diff.	*P* value
General dermatologists, n = 7595 physicians (3459 [45.5%] men; 4136 [54.5%] women)						
E&M outpatient clinic visits						
99202	New patient office or other outpatient visit, typically 20 min	5274 (69.4)	0.13 (0.10)	0.13 (0.10)	0.00	.27
99203	New patient office or other outpatient visit, typically 30 min	5990 (78.9)	0.17 (0.13)	0.16 (0.13)	−0.01	.001
99212	Established patient office or other outpatient visit, typically 10 min	5469 (72.0)	0.32 (0.40)	0.24 (0.24)	−0.08	<.001
99213	Established patient office or other outpatient visit, typically 15 min	7326 (96.5)	0.83 (0.47)	0.73 (0.38)	−0.10	<.001
99214	Established patient office or other outpatient, visit typically 25 min	5275 (69.5)	0.37 (0.37)	0.44 (0.33)	0.07	<.001
Procedures						
11100	Biopsy of single growth of skin, tissue, or both	7002 (92.2)	0.37 (0.20)	0.34 (0.23)	−0.03	<.001
11101	Biopsy of each additional growth of skin, tissue, or both	5413 (71.3)	0.17 (0.28)	0.18 (0.21)	0.01	.11
17000	Destruction of skin growth	7068 (93.1)	0.57 (0.32)	0.51 (0.23)	−0.06	<.001
17003	Destruction of 2−14 skin growths	6842 (90.0)	1.96 (2.30)	1.59 (1.09)	−0.41	<.001
17004	Destruction of 15 or more skin growths	3602 (47.4)	0.17 (0.32)	0.12 (0.17)	−0.05	<.001
17110	Destruction of up to 14 skin growths	6035 (79.4)	0.24 (0.17)	0.23 (0.22)	−0.01	.02
Mohs surgeons, n = 2450 physicians (1718 [70.1%] men; 732 [29.9%] women)						
E&M outpatient clinic visits						
99202	New patient office or other outpatient visit, typically 20 min	1686 (68.8)	0.11 (0.10)	0.11 (0.10)	0.00	.60
99203	New patient office or other outpatient visit, typically 30 min	1703 (69.5)	0.15 (0.13)	0.14 (0.13)	−0.01	.06
99212	Established patient office or other outpatient visit, typically 10 min	2051 (83.7)	0.24 (0.27)	0.24 (0.22)	0.00	.66
99213	Established patient office or other outpatient visit, typically 15 min	2301 (94.0)	0.61 (0.46)	0.60 (0.46)	−0.01	.57
99214	Established patient office or other outpatient, visit typically 25 min	1539 (62.8)	0.28 (0.35)	0.35 (0.33)	0.07	<.001
Procedures						
11100	Biopsy of single growth of skin, tissue, or both	2332 (95.2)	0.33 (0.23)	0.34 (0.24)	0.01	.12
11101	Biopsy of each additional growth of skin, tissue, or both	1948 (79.5)	0.19 (0.29)	0.20 (0.27)	0.01	.34
17000	Destruction of skin growth	2236 (91.3)	0.45 (0.30)	0.43 (0.29)	−0.02	.14
17003	Destruction of 2−14 skin growths	2123 (86.7)	1.65 (1.41)	1.51 (1.35)	−0.14	.03
17311	Removal and microscopic examination of growth of the head, neck, hands, feet, or genitals (first stage, up to 5 tissue blocks)	2447 (99.9)	0.42 (0.32)	0.44 (0.32)	0.02	.14
17312	Removal and microscopic examination of growth of the head, neck, hands, feet, or genitals	2304 (94.0)	0.29 (0.26)	0.32 (0.26)	0.03	.008
Dermatopathologists, n = 1455 physicians (848 [58.3%] men; 607 [41.7%] women)						
E&M outpatient clinic visits						
99202	New patient office or other outpatient visit, typically 20 min	987 (67.8)	0.09 (0.08)	0.09 (0.07)	0.00	.42
99203	New patient office or other outpatient visit, typically 30 min	1103 (75.8)	0.12 (0.10)	0.14 (0.12)	0.02	.002
99212	Established patient office or other outpatient visit, typically 10 min	1096 (75.3)	0.27 (0.37)	0.21 (0.23)	−0.06	.002
99213	Established patient office or other outpatient visit, typically 15 min	1377 (94.6)	0.75 (0.54)	0.67 (0.46)	−0.08	.003
99214	Established patient office or other outpatient, visit typically 25 min	947 (65.1)	0.28 (0.36)	0.32 (0.30)	0.04	.13

Continued

Table II. Cont'd

HCPCS code	HCPCS description	Dermatologists billing for code, no. (%)	Mean clinic visits or procedures per beneficiary by dermatologist sex (SD)			
			Men	Women	Mean diff.	*P* value
Procedures						
11100	Biopsy of single growth of skin, tissue, or both	1329 (91.3)	0.29 (0.27)	0.31 (0.22)	0.02	.14
11101	Biopsy of each additional growth of skin, tissue, or both	1068 (73.4)	0.15 (0.37)	0.15 (0.18)	0.00	.91
17000	Destruction of skin growth	1354 (93.1)	0.55 (0.34)	0.47 (0.27)	−0.08	<.001
17003	Destruction of 2−14 skin growths	1334 (91.7)	1.95 (1.76)	1.56 (1.21)	−0.39	<.001
17110	Destruction of up to 14 skin growths	1188 (81.6)	0.22 (0.18)	0.22 (18)	0.00	.87
88305	Pathology examination of tissue with a microscope, intermediate complexity	1433 (98.5)	0.96 (1.11)	0.79 (0.62)	−0.27	<.001

Mean number of specific services (Medicare evaluation and management outpatient clinic visits and procedures) performed per beneficiary by male and female dermatologists and subspecialists in 2017. The visit types and procedures with the most frequent use within each particular subspecialty were tabulated. Mean differences in service use were determined from an unpaired *t* test. Mean sex difference is calculated as mean value of male dermatologists minus mean value of female dermatologists, with negative differences indicating lower mean values for women compared with men.

Diff., Difference; *E&M*, evaluation and management; *HCPCS*, Healthcare Common Procedural Coding System; *SD*, standard deviation.

to salary (14%),[1] which may guide volume preferences. Despite sex differences, the gap among general dermatologists modestly decreased during the study period, which could reflect a shift in practice preferences among younger dermatologists.

This Medicare claims analysis cannot support universally lower clinical activity among female dermatologists because several dynamics may simply shift female clinical activity toward other populations. Female dermatologists are typically younger and may have fewer established relationships with Medicare patients. Additionally, they are more likely to complete a pediatric fellowship and may consequently dedicate services toward a younger population.[5] However, a sensitivity analysis that excluded dermatologists with minimal Medicare visits (who potentially engage in significant non-Medicare services) did not appreciably affect sex differences in Medicare activity.

Fewer destructive procedures and pathology examinations by female dermatologists and dermatopathologists may stem from differing patient demographics; review of the data set indicated that female dermatologists frequently manage female patients (>60% of beneficiaries), who typically have a lower incidence of actinic keratoses that would warrant these services. Female patients also had lengthier visits, which may limit patient volume. This could be driven by differences in patient complexity or prioritization of time-consuming aspects of patient care (eg, developing relationships, patient counseling), but may simply be due to individual variability in billing practices.

Limitations of this analysis include the inability to correlate these data to salary, given that differences in practice settings, contractual terms, and payer mixes significantly influence income. Additionally, assessment of Medicare data provides only 1 perspective and cannot account for cosmetic services or those provided to non-Medicare patients. Despite these shortcomings, this analysis provides insight into sex differences in dermatology practice behaviors and should motivate further discussion regarding potential drivers of these practice patterns.

Christian Gronbeck, BA,[a] Paula W. Feng, MD,[b] and Hao Feng, MD, MHS[c]

From the University of Connecticut School of Medicine, Farmington, Connecticut[a]; Department of Ophthalmology and Visual Science, Yale University School of Medicine, New Haven, Connecticut[b]; and Department of Dermatology, University of Connecticut Health Center, Farmington, Connecticut[c]

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Correspondence to: Hao Feng, MD, MHS, Department of Dermatology, University of Connecticut Health Center, 21 South Rd, 2nd Floor, Farmington, CT 06032

E-mail: haofeng625@gmail.com

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Delayed diagnosis of nonendemic dermatologic diseases: A retrospective review

To the Editor: Despite almost 20% of international travelers reporting a posttravel dermatologic disorder, limited data exist regarding the epidemiology of nonendemic dermatologic diseases (NEDDs) in the United States.[1,2] We sought to

Table I. Demographic and clinical characteristics of cases of NEDDs (n = 78)

Characteristics	Values (n = 78)
Age, y, mean (SD)	40.7 (16.0)
Female sex, n (%)	26 (33.3)
Purpose of travel, n (%)*	
Immigrant	61 (78.2)
US traveler	10 (12.8)
VFR traveler	3 (3.8)
Foreign traveler	1 (1.3)
No travel	3 (3.8)
Region of travel, n (%)†	
Caribbean	21 (26.9)
Sub-Saharan Africa	19 (24.4)
South America	16 (20.5)
Central America	7 (9.0)
South Asia	6 (7.7)
North America	5 (6.4)
Southeast Asia	3 (3.8)
Middle East	2 (2.6)
Oceania	1 (1.3)
Europe	1 (1.3)
Unknown	1 (1.3)
Diagnosis, n (%)	
Hansen disease	27 (34.6)
Lymphatic filariasis	17 (21.8)
Mycetoma	12 (15.4)
Cutaneous leishmaniasis	11 (14.1)
Chromoblastomycosis	5 (6.4)
Onchocerciasis	3 (3.8)
Buruli ulcer	2 (2.6)
Schistosomiasis	1 (1.3)
Dracunculiasis	0 (0.0)
Yaws	0 (0.0)
Exposure, n (%)	
Arthropods	15 (19.2)
Contaminated soil	7 (9.0)
Infected humans	6 (7.7)
Animals	1 (1.3)
Contaminated water	1 (1.3)
Unknown	48 (61.5)
Prior known diagnosis, n (%)	22 (28.2)
Clinical department making new diagnosis, n (%) (n = 56)	
Dermatology	21 (37.5)
Infectious diseases	21 (37.5)
Surgery	4 (7.1)
Primary care	3 (5.4)
Neurology	3 (5.4)
Inpatient	3 (5.4)
Podiatry	1 (1.8)
Time from symptom onset to diagnosis, mo, median (IQR)‡	20 (3.5-72)
Misdiagnosed, n (%)‡	52 (92.9)

IQR, Interquartile range; *NEDD*, nonendemic dermatologic disease; *SD*, standard deviation; *VFR*, visiting friends/relatives.

**Immigrant* indicates a native of another country who has moved to the United States; *US traveler* indicates a native of the United States who has visited another country for less than 6 months; *VFR traveler* indicates a native of another country who has moved to the United States and returns to his/her home country to visit friends or relatives; *foreign traveler* indicates a native of another country who is visiting the United States.

†The total is greater than 100% because some patients traveled to more than 1 region.

‡Of those with a new diagnosis of a NEDD (n = 56).