

Teledermatology: Canadian dermatologists' practice patterns, perceived challenges, and future recommendations

Sidra Sarfaraz,¹ Tarek Turk,^{2,3} Samuel A. J. Lowe,⁴ Luvneet Verma,⁵ Marlene Dytoc⁵

¹Department of Medicine, Division of Dermatology, The Ottawa Hospital, University of Ottawa, Ontario, Canada; ²Faculty of Medicine and Dentistry, University of Alberta, Edmonton, Canada; ³Department of Dermatology and Venereology, Ministry of Health, Damascus, Syria; ⁴School of Public Health, University of Alberta, Edmonton, Canada; ⁵Division of Dermatology, Faculty of Medicine and Dentistry, University of Alberta, Edmonton, Canada

doi: 10.4081/dr.2025.10197

Supplementary Table 1. Teledermatology practice patterns of Canadian dermatologists and dermatology resident survey respondents.

Survey Areas	N (%)
Do you use teledermatology as part of your practice?	
Yes, I have always used it, even before the COVID-19 pandemic	4 (12.1)
Yes, I have started using it during the COVID-19 pandemic	22 (66.7)
No	7 (21.2)
Were there any advantages of teledermatological services specific to the COVID19 pandemic?	
Convenience/access	57.1
Safety	46.4
Other	7.1
How long have you been practising teledermatology for?	
0-5 years	27 (81.8)
5-10 years	1 (3.0)
10-20 years	3 (9.1)
20+ years	2 (6.1)
How comfortable are you with using teledermatological models, including videoconferencing and store-and-forward teledermatology? Store-and-forward teledermatology involves	

receiving text and images for review, whereas videoconference involves real-time video interactions with patients.

Very Comfortable	8 (24.2)
Fairly Comfortable	13 (39.4)
Somewhat Comfortable	9 (27.3)
Not Comfortable	2 (6.1)
Not Comfortable at all	1 (3.0)

How much do teledermatological consultations constitute of your practice?

100%	1 (3.1)
75%-100%	0 (0)
50-75%	0 (0)
25-50%	1 (3.1)
0-25%	30 (93.8)

What are the conditions that you feel can be approached with confidence using teledermatological services?

Medication monitoring/refill	3 (10.0)
Dermatitis (atopic, seborrheic)	12 (40.0)
Chronic inflammatory conditions (acne, rosacea, psoriasis)	19 (63.3)
Follow-up only for already-established diagnoses	11 (36.7)
Other	2 (6.7)

What conditions do you regularly assess, manage, and follow using teledermatological services?

Medication monitoring/refill	5 (16.7)
Dermatitis (atopic, seborrheic)	9 (30.0)
Chronic inflammatory conditions (acne, rosacea, psoriasis)	18 (60.0)
Follow-up only for already-established diagnoses	4 (13.3)
None	5 (16.7)
Other	8 (26.7)

Which teledermatological interaction model do you think is the most efficient?

Video conferencing	2 (6.1)
Photo storage (store and forward)	14 (42.4)
Hybrid – video conferencing and photo storage	8 (24.2)
Phone calls	5 (15.2)
Other	4 (12.1)

Which teledermatological interaction model do you prefer? Select all options that apply.

Dermatologist-Referring physician	12 (37.5)
Dermatologist-Patient directly	11 (34.4)
It depends on the case	13 (40.6)
Other	1 (3.1)
Which teledermatological interaction model do you use? Select all options that apply.	
Dermatologist-referring physician	7 (21.9)
Dermatologist to patient directly	23 (71.9)
It depends on the case	4 (12.5)
Other	3 (9.4)
How much do you agree with the following statement: "I plan to use or keep using teledermatology in the future"?	
100%	6 (18.2)
75%-100%	2 (6.1)
50-75%	5 (15.2)
25-50%	3 (9.1)
0-25%	17 (51.5)
How satisfied are you with the clinical outcomes of your teledermatology practice?	
Very Satisfied	6 (19.4)
Fairly Satisfied	3 (9.7)
Somewhat Satisfied	16 (51.2)
Not Satisfied	4 (12.9)
Not Satisfied at all	2 (6.5)
How satisfied are you with the clinical outcomes for patients with atopic dermatitis in your teledermatology practice?	
Very Satisfied	5 (16.1)
Fairly Satisfied	6 (19.4)
Somewhat Satisfied	13 (41.9)
Not Satisfied	7 (22.6)
Not Satisfied at all	0 (0)
What kind of care do you provide for patients with atopic dermatitis in your teledermatology practice? Select all options that apply.	
Diagnosis	16 (51.6)
First visit management	13 (41.9)
Follow-up	26 (83.9)
Prescription refills	20 (64.5)
Patient scoring (EASI, DLQI)	6 (19.4)
Patient education	18 (58.1)
Family education	10 (32.3)
Other, please specify	1 (3.2)

How confident are you with diagnosing and managing patients with atopic dermatitis through teledermatology?	
Very confident	7 (21.9)
Fairly confident	11 (34.4)
Somewhat confident	8 (25.0)
Not confident	5 (15.6)
Not confident at all	1 (3.1)
What teledermatological platform(s) do you use for your teledermatology practice?	
EMR	1 (3.7)
Designated platform i.e., Zoom™, ConsultDERM™, Ontario Telemedicine Network™, Medeo™, Provincial Virtual Care Platform	14 (51.9)
Telephone	10 (37.0)
Telephone and photo	5 (18.5)
Secure email	3 (11.1)
None	4 (14.8)
Other	1 (3.7)
How satisfied are you with the technological platform you use(d) for your teledermatology practice?	
Very Satisfied	3 (10.0)
Fairly Satisfied	8 (26.7)
Somewhat Satisfied	15 (50.0)
Not Satisfied	4 (13.3)
Not Satisfied at all	0 (0)
How satisfied are you with the cost of your teledermatology platform?	
Very Satisfied	6 (25.0)
Fairly Satisfied	10 (41.7)
Somewhat Satisfied	5 (20.8)
Not Satisfied	3 (12.5)
Not Satisfied at all	0 (0)

N, number of responses for each answer; percentages were calculated for each question based on the total number of responses; EASI, Eczema Area and Severity Index; DLQI, Dermatology Life Quality Index; EMR, electronic medical record.

Supplementary Table 2. Bivariate associations between physician characteristics and teledermatology indicators among Canadian dermatologists (N=33).

	Uses teledermatology in practice			Received training in teledermatology			Highly comfortable using teledermatology models		
Physician characteristics	% yes	% no	p-value*	% yes	% no	p-value	% yes	% no	p-value
<i>Age</i> mean years (SD)	44.1 (14.8)	45.0 (18.9)	0.96	46.1 (16.8)	44.2 (14.2)	0.80	46.2 (16.9)	40.8 (11.7)	0.50
<i>Years practicing medicine</i> mean years (SD)	13.3 (15.6)	11.4 (14.4)	0.69	12.7 (15.9)	14.0 (15.3)	1.00	14.8 (16.5)	9.2 (11.9)	0.33
<i>Gender</i> Female (n=15) Male (n=13)	86.7% 76.9%	13.3% 23.1%	0.64	42.9% 38.5%	57.1% 61.5%	1.00	73.3% 61.5%	26.7% 38.5%	0.69
<i>Title</i> Resident (n=9) Staff Physician (n=20)	77.8% 85.0%	22.2% 15.0%	0.63	0.0% 55.0%	100.0% 45.0%	0.010	44.4% 75.0%	55.6% 25.0%	0.21
<i>Practice type</i> Private (n=14) Non-private (n=15)	85.7% 80.0%	14.3% 20.0%	1.00	57.1% 21.4%	42.9% 78.6%	0.12	78.6% 53.3%	21.4% 46.7%	0.25

<i>Practice location</i>									
Urban (n=25)	80.0%	20.0%	1.00	41.7%	58.3%	1.00	60.0%	40.0%	0.27
Non-urban (n<5)	100.0%	0.0%		25.0%	75.0%		100.0%	0.0%	
	Highly satisfied with clinical outcomes of teledermatology			Highly confident using teledermatology for diagnosis and patient management			Score of perceived benefits of teledermatology†		
Physician characteristics	% yes	% no	p-value	% yes	% no	p-value	% high score	% low score	p-value
<i>Age</i>									
mean years (SD)	47.6 (18.6)	44.6 (14.2)	0.81	40.5 (16.5)	50.9 (11.8)	0.032	44.7 (19.2)	44.0 (11.7)	0.57
<i>Years practicing medicine</i>									
mean years (SD)	18.4 (20.1)	12.0 (12.9)	0.67	11.8 (17.9)	15.9 (10.8)	0.11	11.1 (18.0)	14.7 (12.6)	0.061
<i>Gender</i>									
Female (n=15)	23.1%	76.9%	0.67	42.9%	57.1%	0.12	33.3%	66.7%	0.26
Male (n=13)	38.5%	61.5%		76.9%	23.1%		61.5%	38.5%	
<i>Title</i>									
Resident (n=9)	12.5%	87.5%	0.36	66.7%	33.3%	0.69	66.7%	33.3%	0.25
Staff Physician (n=20)	36.8%	63.2%		52.6%	47.4%		40.0%	60.0%	

<i>Practice type</i>									
Private (n=14)	38.5%	61.5%	0.42	53.9%	46.2%	1.00	35.7%	64.3%	0.27
Non-private (n=15)	21.4%	78.6%		60.0%	40.0%		60.0%	40.0%	
<i>Practice location</i>									
Urban (n=25)	26.1%	73.9%	0.56	62.5%	37.5%	0.29	48.0%	52.0%	1.00
Non-urban (n<5)	50.0%	50.0%		25.0%	75.0%		50.0%	50.0%	
	Score of perceived challenges of teledermatology‡								
Physician characteristics	% high score	% low score	p-value						
<i>Age</i>									
Mean years (SD)	44.1 (13.9)	44.5 (16.8)	0.79						
<i>Years practicing medicine</i>									
mean years (SD)	13.1 (13.5)	12.9 (17.2)	0.52						
<i>Gender</i>									
Female (n=15)	60.0%	40.0%	0.45						
Male (n=13)	38.5%	61.5%							

<i>Title</i>									
Resident (n=9)	44.4%	55.6%	1.00						
Staff Physician (n=20)	50.0%	50.0%							
<i>Practice type</i>									
Private (n=14)	35.7%	64.3%	0.27						
Non-private (n=15)	60.0%	40.0%							
<i>Practice location</i>									
Urban (n=25)	48.0%	52.0%	1.00						
Non-urban (n<5)	50.0%	50.0%							

Bold, statistical significance at $p \leq 0.05$; *p-value were generated using Mann-Whitney U tests for continuous physician characteristics and Fisher's exact tests for categorical physician characteristics; †10-item summative scale of the perceived benefits of tele dermatology ($\alpha=0.92$); ‡8 item summative scale of the perceived challenges of tele dermatology ($\alpha=0.82$).