

## French Teledermatologists: Activity and Motivations Prior to the COVID-19 Pandemic

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During the COVID-19 pandemic, dermatologists were urged to postpone non-urgent visits and to use telemedicine to maintain access and continuity of care (1–3). France enacted telemedicine coverage in September 2018 for teleconsultation, i.e. live-and-interactive (LI) videoconferencing teledermatology (TD), and in February 2019 for teleexpertise or store & forward (S&F) (4–6). Prior to the COVID-19 pandemic this study reviewed the profile, activity, and motivations of dermatologists practicing TD after its coverage, using a comprehensive survey.

### MATERIALS AND METHODS

From April to June 2019, a web survey was released using the newsletter of the Société Française de Dermatologie. The first questions distinguished dermatologists practicing TD, those willing to implement TD in their practice, those with unstructured and informal TD activity, and those with no declared activity. Questions regarding dermatologists' profiles included their age group and workplace; those regarding TD included: the practice model, the tool used, the type of referrals and referring physicians, the number of expertise provided, the organization of TD within their regular activity, and post-TD organization. The profile activity and motivation of dermatologists having a regular ongoing TD activity were analysed and compared with those expecting to start a TD activity. Qualitative variables were expressed as frequencies and percentages. Categorical variables were compared using a  $\chi^2$  test. All tests were 2-tailed,  $p \leq 0.05$  indicated statistical significance. This study was exempted from an Institutional review board.

### RESULTS

Among the 3,132 dermatologists contacted, 362 (12%) responded. Most of the respondents had an unstructured and informal TD practice ( $n=198$ , 55%), 68 (19%) reported a regular TD activity, 47 (13%) planned to start one, and 49 (13%) never practiced TD. Dermatologists practicing TD were mostly female (female:male=2), aged  $\geq 46$  years old ( $n=49$ , 72%), working in private practice ( $n=39$ , 57%), and had a TD practice for less than 2 year ( $n=32$ , 49%). Most of the responders practiced S&F TD ( $n=53$ , 82%) vs LI ( $n=19$ , 31%) and had  $\leq 5$  TD activities/week ( $n=49$ , 75%), used a public platform ( $n=37$ ,

60%) or a encrypted secured professional e-mail ( $n=17$ , 27%). TD activity was performed as an add-on to their regular work ( $n=43$ , 66%) sometimes during non-working hours ( $n=27$ , 42%), and rarely during specific dedicated time ( $n=13$ , 20%). At the start, most tele-dermatologists ( $n=42$ , 62%) worked in funded programmes, mainly financed by public institutions ( $n=35$ , 83%). Half of them declared the activity as sustainable ( $n=36$ , 55%). In comparison with dermatologists already practicing TD, those expecting to develop it were significantly younger, practicing in hospital, starting without funds, and less interested in working for institutions for elderly people (Table SI<sup>1</sup>). They expected their TD activity to fall within their existing planning, for less than 1 h/week and entail more than 6 requests/week. Concerning the implementation of TD, dermatologists with a TD project planned to use specific tools, not necessarily on smartphones (Table SI<sup>1</sup>). Comparing the expectations of both groups showed that dermatologists with a TD project were significantly less concerned with increasing or organizing care pathways, yet more concerned with organizing dedicated post-TD visits (Table I).

<sup>1</sup><https://www.medicaljournals.se/acta/content/abstract/10.2340/00015555-3836>

**Table I. Utility and expectations regarding teledermatology (TD) for dermatologists practicing and with the perspective of practicing TD**

	Practicing TD $n=68$ $n$ (%)	Perspective of practicing TD $n=47$ $n$ (%)	$p$ -value
Follow-up by TD	28 (41)	12 (26)	$<10^{-3}$
Post-TD dedicated visits	37 (54)	32 (68)	$<10^{-3}$
Utility of TD			
Time saving	18 (26)	1 (2)	$<10^{-3}$
Triaging	33 (49)	12 (26)	$<10^{-3}$
Preparing in-person visit	14 (21)	8 (17)	$<10^{-3}$
Expertise for limited group	21 (31)	10 (21)	$<10^{-3}$
Formalized/unformal activity	27 (40)	12 (25)	$<10^{-3}$
Expectations			
Increase access to the dermatologists	48 (71)	16 (34)	$<10^{-3}$
Skin tumour screening	33 (41)	15 (32)	$<10^{-3}$
Management of emergencies	34 (50)	14 (30)	$<10^{-3}$
Management of elderly patient's skin conditions	48 (71)	19 (41)	$<10^{-3}$
Decrease unnecessary travel	44 (61)	19 (40)	$<10^{-3}$
Cost-saving	18 (26)	6 (12)	$<10^{-3}$

## DISCUSSION

Despite the financial incentives, dermatologists with a regular TD activity remained marginal in France in 2019. Most of the survey respondents practiced an unstructured and informal TD activity. Interestingly, dermatologists planning to start TD, were, in contrast to pioneers, less concerned about dermatology care organization and expected this activity to be scheduled and integrated into their regular activity. However, the visual characteristics of dermatology, and the insufficient number of physicians are a strong leverage for implementation of TD in the regular care process. Authors pointed out the value and benefits of TD for triaging skin diseases (severity, emergency), referral organization, and to decrease the lead times to consultation, while providing an increase in dermatological skill for non-specialists (7–12).

For most physicians practicing TD, it was an add-on to their regular activity, with only half of them organizing post-TD visits and a minority having financial rewards. In contrast to other countries, French TD is not reserved to underserved population or rural areas, but its financial benefit was stated in a prison setting (10). Prior to the COVID-19 pandemic, in France, financial reimbursement mostly concerned LI TD: patients who have had an in-person consultation within 12 months; and for S&F TD: patients with chronic diseases, living in institutions for elderly people, in detention, or in underserved areas. Fees were at the level of an in-person visit for LI TD, and at less than half of the regular fee for S&F (4). During the pandemic, access to TD was enlarged without additional financial rewards.

In the literature, barriers to implementation of TD described previously were: reduced reimbursement, dermatologists' lack of confidence in the procedure, medical risks, and lack of knowledge of equipment setup (13, 14). This work highlighted that financial incentives were not the sole leverage to adoption of TD. Based on the current study, TD needed professionalization in the network setting and the in-person follow-up pathways.

The main limitation of the current study was that the data were based on self-reporting non-exhaustive, voluntary answers. As the response rate was only 12%, it was hypothesized that only dermatologists practicing TD felt concern by the questionnaire or survey at the time this survey was conducted. In the light of the consequences of the COVID-19 pandemic on reorganizing dermatological consultations, almost all dermatologists must have tried to implement this care delivery rapidly.

In conclusion, in 2019, TD in France was in its early stages, and could be regarded as a new practice. Motivation to start practicing TD seemed to be linked to work-time reorganization rather than to adding a new activity. The COVID-19 pandemic forced most dermatologists to prioritize remote management over in-person consultations, regardless of their expectations. However, in the post-crisis period, moulding TD to fit dermatologists'

preferences and motivations prior to the pandemic is essential for its development.

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