


# Teledermatology Practice in a Department that Was Relocated Multiple Times during the COVID-19 Pandemic

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**Abstract:** The COVID pandemic inherently impacts clinical activity in Dermatological practices throughout all sectors. Under these circumstances, our service has implemented teledermatology in order to act both as a filter for reducing in-hospital admittance or face-to-face interactions, and as a straightforward solution to solve the issues faced by patients and family doctors within our area. Live consultations rely on the resident physician's capacity to take a detailed patient history in the limited time allotted, while the subsequent case-discussion with the leading-physician has good didactic value. The establishment of a quality international collaboration through teledermatology would further facilitate a more accurate and faster diagnosis, even for patients traveling for business or tourism.

**Keywords:** teledermatology, resident training, research tool, dermatology, COVID-19, residency training

In Romania, an emergency state has been declared, with a series of military ordinances being published during the previous months in order to clear hospital beds by only admitting urgent cases and limiting resident physicians' exposure to the circulating virus by implementing shift work with reduction in the total number of in-clinic hours. All the while, it remained possible that resident physicians could be called in to fulfill other necessary activities outside of our current module in order to help combat COVID infection.<sup>1,2</sup> This inherently impacts the clinical activity in Dermatological practices throughout all sectors. Our department, a subunit of the Clinical Infectious Disease hospital “Sfânta Cuvioasa Parascheva” in Galati, was moved to another hospital in order to facilitate the availability of beds for COVID patients. Initially, the hospital in question was the Railroad Hospital, but after this was also charged with providing intensive care for COVID patients, our department was once again relocated to another hospital, the Psychiatry Hospital, in a common ward with our colleagues from the infectious disease hospital who were treating non-COVID cases. Under these circumstances, our service took the decision of implementing teledermatology in order to act both as a filter for reducing in-hospital admittance or face-to-face interactions, and as a straightforward solution to solve the issues faced by patients and family doctors within our area. This was put into practice by using dedicated emails and Skype services, and we are currently instituting Zoom as an alternative method of communication to try and maximize patient access by diversifying the means through which we can be contacted. This embodies opportunities for resident physicians to consult and treat multiple clinical cases from a distance, without having the constraint of seeing only the typical hospital admittances. Live consultations rely on the resident physician's capacity to take a detailed patient history in the limited time allotted, while the subsequent case-discussion with the leading-physician has good didactic value. Positive feedback was received from the resident physicians, and by using this method, we were also able to meet with the residency program requirements. During the first 7 days, when our service was still rather unknown to the public, we registered 107 teleconsultations. In this timeframe, the legislation was changed in order to allow consultations to be given both to the insured and uninsured. We believe teledermatology is an important method, both for strengthening the collaboration with physicians outside of the dermatology area, and for accommodating efficient monitoring of the patients' evolution and treatment effectiveness. From our department's

experience, the first 26 cases that have been consulted through teledermatology have had good treatment response, confirmed by patient feedback through emails. Two of these cases had difficulties accessing their family doctor, and they would certainly have been unable to access further specialist care (one patient was from the rural area, and the other has nosocomophobia). The advantage of this technique stems from the fact that most patients possess camera cell phones with internet access, facilitating access to the teledermatology platform. There is also a potential for dermoscopy device use, such as DermLite HUD (3Gen DermLite), in order to monitor skin lesions without having the patient leave his/her home. Concerns have been raised over the limited patient interaction through the use of images and that their quality is highly variable. By correctly educating and informing the population one can ensure the efficient use of teledermatology. Resident physician training can indeed benefit from the use of teledermatology – its use may indeed gain a more permanent place in the day-to-day medical practice of the future. With the current legislation giving resident physicians the opportunity to manage cases under the guidance of attending physicians, it would be prudent to have university hospitals create protocols that make use of resident physicians in order to further resident training and also work out problems which may be encountered during this time of decreased in-person patient-physician interaction.<sup>3</sup>

The COVID pandemic, as an epidemiological security problem, gave us through teledermatology the opportunity to communicate and convey information and images in order to exchange details and deepen research both in the field of Dermatology and other medical specialties; these collaborations materialized in the form of 14 publications in the international flow, our team including national and international researchers, both dermatologists and other specialties - infectious diseases, internal medicine, cardiology, psychiatry, gastroenterology, rheumatology, surgery, radiology.<sup>4-17</sup> The addressed issues were related to COVID-19 and skin manifestations, sexual transmission, prevention, inflammation, interleukin IL-6, vesicular lesions and the Koebner phenomena, Demodex and SARS-CoV-2, psychiatric symptoms, psoriasis-vaccine induced flares.<sup>4-17</sup> This prolific collaboration was the basis of research continuity and multidisciplinary collaboration even after the pandemic state ended, strengthening the integration teledermatology use as a clinical, imaging and research tool.<sup>18-21</sup>

The limitations of teledermatology consisted in technological ones: connectivity problems for elderly people and concerns related to data protection or privacy.<sup>22</sup>

Our patients with inflammatory skin conditions like acne, atopic dermatitis, psoriasis, and hidradenitis suppurativa benefitted consistently from the teledermatology services provided.<sup>22</sup>

As dermatology services were considered to be vectors for COVID-19 transmission and up to even 20% of COVID-19 cases were associated with skin diseases,<sup>23,24</sup> the teledermatology service set up by our department provided a safe virtual consultancy space for patients of all ages. The relatively high patient teledermatology services addressability provided a large number of patients for the resident physicians to care for and allowed the latter the continuation of their residency programme; these services also provided patients with continuous medical care and allowed a multidisciplinary physician collaboration with important international results.

The establishment of good international collaboration through teledermatology would further facilitate a better and a faster diagnosis, even for patients traveling for business or tourism.

In the future, teledermatology should be considered as a day-by-day procedure for stand-alone use or with the help of artificial intelligence, being resourceful tools for our patients and speciality.

## Acknowledgments

The current paper was academically supported by the “Dunarea de Jos” University of Galati, Romania, through the Multidisciplinary Integrated Center of Dermatological Interface Research (MIC-DIR) [Centrul Integrat Multidisciplinar de Cercetare de Interfata Dermatologica (CIM-CID)].

## Funding

This article has no funding source.

## Disclosure

The author reports no conflicts of interest in this work.

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