

Telemedicine in French memory clinics during Covid-19 crisis

Alexandre Morin¹ | Thibault Pressat-Laffouilhère² | Marie Sarazin^{3,4} |
 Julien Lagarde^{4,5} | Carole Roue-Jagot⁶ | Claire Paquet^{7,8,9} | Emmanuel Cognat^{10,11} |
 Julien Dumurgier^{12,13} | Florence Pasquier^{14,15,16} | Thibaud Lebouvier^{17,18} |
 Mathieu Ceccaldi^{19,20} | Olivier Godefroy^{21,22} | Olivier Martinaud²³ |
 Julien Grosjean²⁴ | Aline Zarea²⁵ | David Maltête²⁴ | David Wallon^{25,26}

¹ Department of Neurology, Rouen University Hospital, F-76000, Rouen, FR, Paris, France

² Rouen University Hospital, F-76000, Rouen, FR, Paris, France

³ Neurology of Memory and Language, Université Paris Descartes, Sorbonne Paris Cité, INSERM UMR S894, Centre Hospitalier Sainte Anne, Paris, France

⁴ Université Paris-Saclay, CEA, CNRS, Inserm, BioMaps, Orsay, France

⁵ Neurologie de la Mémoire et du Langage, Université Paris Descartes, Sorbonne Paris Cité, INSERM UMR S894, Centre Hospitalier Sainte Anne, Paris, France

⁶ , Hôpital Sainte Anne, Paris, FR, Paris, France

⁷ Université de Paris APHP GHU Nord Centre de Neurologie Cognitive Lariboisière Hospital INSERMU1144, Paris, France

⁸ Université Paris Diderot, INSERM U942, AP-HP, Cognitive Neurology Center, Paris, France

⁹ INSERM UMR-S1144, Paris, France

¹⁰ INSERM UMR-S942 Université Paris Diderot, Paris, France

¹¹ Cognitive Neurology Center, GH Saint-Louis - Lariboisière - Fernand-Widal, APHP, Paris, France

¹² Paris Diderot University, Paris, France

¹³ Cognitive Neurology Center, Hôpital Lariboisière-Fernand Widal APHP, Paris, France

¹⁴ INSERM 1172, Lille, France

¹⁵ Université de Lille, Lille, France

Abstract

Background: In early 2020, COVID-19 outbreak struck France leading to a national lockdown between March 17th and May 11th. While standard in-person medical consultation was complicated, telemedicine dramatically expanded. In order to evaluate the impact of this unprecedented situation on clinical practice and use of psychoactive drug in dementia care, we conducted a nationwide clinical prospective and retrospective study.

Method: During the lockdown period, telemedicine patients' demographic and clinical data were retrospectively collected from 7 French memory clinics (telemedicine cohort). Clinical diagnoses, treatment changes, cognitive modifications since last consultations and living conditions during the lockdown were systematically retrieved.

In Rouen site, we also included patients only reached by a secretary to propose a postponed visit after lockdown (no-telemedicine cohort) and patients seen in 2019 during the same period of the year (Rouen-2019).

The primary outcome was any change in psychoactive drug and a specific analysis on sedative treatment increase was the secondary outcome, defined as any increase in the prescriptions of antipsychotics or benzodiazepines.

Result: The telemedicine cohort included 874 patients (73 from Rouen), while no-telemedicine control cohort and Rouen-2019 cohorts included respectively 86 and 234 patients (table 1). In the telemedicine cohort, treatments were modified for 10.7% of the patients with more treatment modification among the patients living with a relative (+5.8% (CI95% [0.2%; 11.4%] p=0.04) and among the patients with Alzheimer's disease (+12.2% (CI95% [7.1%; 17.3%] p<0.001). When comparing therapeutic strategies in 2020 and 2019 for Rouen site, 24.6% of the patients had their treatment modified in 2020 and 12.4% in 2019. That difference was however not statically significant

¹⁶ CHU, CNR-MAJ, Labex Distalz, LiCENDLille, Lille, France

¹⁷ INSERM U1172 / National Reference Centre for Young Onset Dementia / Neurology Department/DistAlz, University Hospital, Lille, France

¹⁸ Univ. Lille, Inserm, CHU-Lille, Lille Neuroscience & Cognition, F-59000, Lille, France

¹⁹ Aix Marseille University, Marseille, France

²⁰ Memory Resource and Research Center of Marseille, CHU de Marseille, Hôpital de La Timone, Marseille, France

²¹ Memory Resource and Research Center of Amiens, CHU Amiens Picardie, Hôpital Nord, Amiens, France

²² CHU Amiens, Amiens, France

²³ Caen University Hospital, Caen, France

²⁴ Rouen University Hospital, F-76000, Rouen, FR, Rouen, France

²⁵ Normandie Univ, UNIROUEN, Inserm U1245 and Rouen University Hospital, Department of Neurology and CNR-MAJ, F 76000, Normandy Center for Genomic and Personalized Medicine, Rouen, France

²⁶ CNR-MAJ & Neurology, Rouen University Hospital, Rouen, France

Correspondence

Alexandre Morin, Department of Neurology, Rouen University Hospital, F-76000, Rouen, FR, Paris, France.

Email: alexandre.morin@gmx.com

with an adjusted percentage difference of -4% (CI95% [-10.8%; 3.4%] p=0.27, including the telemedicine and no-telemedicine cohorts for 2020.

Conclusion: Telemedicine seems to have had only minor negative impacts on clinical practice in memory clinics.

TABLE 1

	Telemedicine cohort	<i>incl. Rouen- Telemedicine cohort</i>	No-telemedicine controls	Rouen-2019 controls
Patients (n)	874	73	86	234
Age (years)	71.2 (+/-11.7)	70.8 (+/- 10.4)	70.2 (+/- 12.5)	66.1 (+/-12.8)
Sex (N female, %)	89 (43.4%)	27 (37%)	47 (54.7%)	126 (54%)
Context [N, (%)]				
Scheduled consultation	763 (87.3 %)	67 (91.8 %)	NA	NA
Unscheduled consultation	104 (11.9 %)	6 (8.2 %)	NA	NA
Other reason	7 (0.8 %)	0 (0 %)	NA	NA
Lockdown conditions [N, (%)]				
Alone in a flat	140 (16.2 %)	6 (8.2 %)	NA	NA
Alone in a house	44 (5.1 %)	5 (6.8 %)	NA	NA
In a nursing home	38 (4.4 %)	5 (6.8 %)	NA	NA
With relative in a flat	304 (35.1 %)	6 (8.2 %)	NA	NA
With a relative in a house	339 (39.2 %)	51 (69.9 %)	NA	NA
Diagnosis [N, (%)]				
Alzheimer's disease	369 (43.2 %)	31 (44.3 %)	35 (41.2%)	74 (31.8 %)
Fronto-temporal Lobar Degeneration	59 (6.9 %)	8 (11.4 %)	6 (7.1%)	16 (6.9 %)
Lewy body Disease	62 (7.3 %)	8 (11.4 %)	7 (8.2%)	3 (1.3 %)
Other	28 (3.3 %)	1 (1.4 %)	5 (5.9%)	12 (5.2 %)
Psychiatric disorder	3 (0.4 %)	1 (1.4 %)	10 (11.8%)	24 (10.3 %)
Undetermined	268 (31.4 %)	20 (28.6 %)	16 (18.8%)	89 (38.2 %)
Vascular or toxic dementia	65 (7.6 %)	1 (1.4 %)	6 (7.1%)	15 (6.4 %)