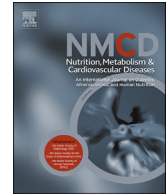




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LETTERS TO THE EDITOR

Facilitators and barriers for the implementation of a telemedicine program in nutrition during the COVID-19 pandemic



Dear Editor,

During the first wave of the COVID-19 pandemic, when outpatient clinics were stopped in many countries, telemedicine emerged as a powerful tool to provide long-term assistance to chronic patients with no need of face-to-face consultations. Studies performed well before COVID-19 showed that the implementation of telemedicine may be hindered by specific barriers including technically challenged staff, resistance to change, cost, reimbursement, age, and level of education of patients [1]. Here we describe our experience in implementing a nutrition telemedicine program during the COVID-19 pandemic, which suggests that not only these barriers, but also new COVID-19-related barriers (and facilitators) influenced patient participation. From April 23 to June 15, 2020, we proposed to 591 patients (median age 59 [45–69] years; 55,16% women) to switch to nutrition telemedicine consultation given by phone or by personal-computer videocalls. Thirty-five percent of them [n = 207] were affected with chronic kidney disease (CKD), 31.5% [n = 186] with metabolic disorders (mainly hyperlipidemia, reduced carbohydrate tolerance or diabetes), 22.3% [n = 132] with obesity and 11.2% [n = 66] were in follow-up after bariatric surgery. Females were more represented than males in all the disease groups except CKD patients. Patients in follow-up after bariatric surgery were younger than those of the other disease groups. About forty percent (n = 249 [42.1%]) of the patients accepted to undergo the program and most of them opted for phone consultations. Many patients who refused their consent explained their choice with the inability to pay for the consultation by online wire transfer, which, during the first wave of the pandemic, was the only acceptable method of payment. In addition, many of the patients with obesity told us that they were afraid of undergoing telemedicine consultation since, during the lockdown, they were “eating too much” or “not following the dietary program”. Percentage of acceptance was significantly higher in patients aged more than 60 years than in younger patients and in those with

CKD as compared with other disease groups (Table 1). Telemedicine acceptance was lower in patients in follow-up after bariatric surgery than in any other disease group. Gender, education and living downtown did not seem to influence telemedicine acceptance. An important finding of our study was the unexpected higher acceptance in older than in younger patients. We speculate that this could be a consequence of the increased sense of loneliness induced by social confinement during the lockdown [2], which could have made older adults more prone participating to telemedicine consultations to be involved in some form of social interaction. In this perspective it is also important to notice that we overcame the barrier effect of poor informatic literacy in the elderly by offering

Table 1 Factors influencing telemedicine acceptance in the study population

		Accepting telemedicine	Refusing telemedicine	Total
Gender	Females	128 (39,3)	198 (60,7)	326
	Males	121 (45,7)	144 (54,3)	265
Age	18–59 yr*	109 (36,6)	189 (63,4)	298
	60–75 yrs	140 (47,8)	153 (52,2)	293
Place of residence	Downtown	135 (42,6)	182 (57,4)	317
	Suburbs	114 (41,6)	160 (58,4)	274
Disease requiring nutritional consultation	CKD†	115 (55,6)	92 (44,4)	207
	Obesity	56 (42,4)	76 (57,6)	132
	Bariatric surgery†	13 (19,7)	53 (80,3)	66
	Metabolic diseases	65 (34,9)	121 (65,1)	186
Education	Elementary school	46 (44,7)	57 (55,3)	103
	Middle school	92 (44,9)	113 (55,1)	205
	High school	93 (41,7)	130 (58,3)	223
	College	18 (30,0)	42 (70,0)	60

The numbers in parentheses represent percentages of the total. Within groups and intergroups comparisons were performed using χ^2 test followed, when appropriate, by Bonferroni post-hoc comparisons. The threshold for significance was set at $p < 0.01$. * $p < 0.01$ vs 60–75 yrs old; † $p < 0.01$ vs the other disease groups

phone call consultations. Another COVID-19-related factor that influenced the acceptance of our nutrition telemedicine program was the loss of compliance to diet among patients with obesity [3]. In conclusion, a detailed knowledge of context-specific barriers and facilitators is needed when implementing telemedicine consultations since unexpected context-specific factors may emerge in specific conditions as suggested by our observations during the COVID-19 pandemic.

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