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The COVID-19 pandemic in developing countries: A new opportunity to improve the monitoring of patients with diabetes mellitus



The narrative review published by Macherera et al. [1] has been of great interest to us, as it highlights the importance of establishing a personalized educational plan in patients with diabetes during the COVID-19 pandemic, based on preventive measures, medications, changes in lifestyle, self-monitoring of glucose, foot

care and prevention of complications. This is something that we are also currently doing in Peru, which to date is the country with the highest mortality rate from COVID-19 in the world, taking into account the number of inhabitants [2].

The COVID-19 pandemic has taught us many lessons, including

Table 1

Monitoring sheet for patients with diabetes mellitus. Source: Division of Endocrinology. Hospital Nacional Guillermo Almenara Irigoyen. Lima, Peru.

Date														
Name														
Type of diabetes mellitus														
Complications of diabetes														
Comorbidities														
	INITIAL			FIRST WEEK				SECOND WEEK		THIRD WEEK		FOURTH WEEK		
Weight														
Height														
Body mass index														
Waist circumference														
MY TREATMENT														
Oral antidiabetic														
Insulin dose														
Other treatments														
GLUCOSE MONITORING	INITIAL	M	W	F	M	W	F	M	W	F	M	W	F	
Fasting glucose														
Postprandial glucose (2 hours after meals)														
PHYSICAL ACTIVITY	FIRST WEEK			M	T	W	T	F	S	S				
Circle the days that you complete at least	SECOND WEEK			M	T	W	T	F	S	S				
15 min of continuous	THIRD WEEK			M	T	W	T	F	S	S				
physical activity, write down	FOURTH WEEK			M	T	W	T	F	S	S				
the total number of minutes	Goal: 150 minutes per week													
of physical activity at the end of each week	Examples: Fast walking, jogging, dancing, riding a bicycle, climbing stairs, etc.													
FOOD CONSUMED DURING THE DAY				FIRST WEEK				SECOND WEEK		THIRD WEEK		FOURTH WEEK		
Breakfast														
Snacks														
Lunch														
Snacks														
Dinner														
Write down the main concerns that you have about your diet							Examples: I have anxiety about eating, I don't eat at the right times, I skip or delay a meal, I don't know how to cook							
REST														
What time do you wake up?							What time do you go to bed?							
							Yes		No					
OTHERS														
MY HBA1C	INITIAL			ESPECIFIC GOAL <8% _____										
	<7% _____													
	<6.5% _____													

(continued on next page)

Table 1 (continued)

MY LIPID PROFILE	INITIAL	ESPECIFIC GOAL
		LDL cholesterol (mg/dl): _____
		HDL cholesterol (mg/dl): _____
		Triglycerides (mg/dl): _____

that diabetic patients have a higher risk of mortality and of developing severe course of disease [3]. In this context, maintaining adequate metabolic control of diabetic patients is of extreme importance [4]. However, circumstances such as confinement, closure of outpatient clinics, and the fear of contracting SARS-CoV-2 result in less access to healthcare services.

Under these circumstances, it is essential for us to adapt our medical practice and find ways that allow us to provide the necessary care to our patients. A very interesting alternative is telemedicine. In 2018 and 2019, two meta-analyses of controlled clinical trials were carried out with the aim of comparing the results of telemedicine and the usual care for diabetic patients. Both studies found a greater reduction in glycated hemoglobin (HbA1c) in the telemedicine group, especially in older patients with type 2 diabetes with a HbA1c > 9% and when performing more frequent interventions (at least 6 times a year) [5,6].

In our clinical practice, in the Endocrinology department of a Peruvian national hospital, we have created a monitoring sheet that is delivered to our patients upon discharge (Table 1), allowing patient follow-up with good results so far. The use of this tool has gained acceptance in our patients, particularly during this time, greatly facilitating their interaction with medical personnel and giving them a sense of security and empathy. With a single picture of the file, healthcare professionals can provide counseling and treatment adjustments. Additionally, patients can record their progress and goals, thus increasing their commitment and adherence.

In conclusion, we highlight that although Peru is one of the countries that is suffering the most from the consequences of the COVID-19 pandemic, this may be an opportunity to discover tools to improve the control of patients with diabetes and contribute to overcoming barriers to the access of health services.

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I, Marcio José Concepción Zavaleta, registered doctor in Peru, belonging to the Endocrinology department of Guillermo Almenara National Hospital, declare that all authors don't have conflict of interest in this publication.

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