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## Editorial

# “Diabetes as a case study of chronic disease management”: Eight years later. The opportunity learned from the COVID-19 pandemic



COVID-19 pandemic is still affecting the world and Health Care systems are facing very difficult situations as never before [1]. People with diabetes are paying a very high price to COVID-19, in terms of worse prognosis and high possibility to die [1].

Several recommendations have been published on how to manage several specific aspects when COVID-19 is present in people with diabetes [2–4] or on how to manage the diabetes therapy during the pandemic [4,5]. However, it is clear that any recommendation to be followed needs an interaction between the person with diabetes and the health care professionals, which has been the major challenge in the period of lockdown and social distance [6]. Telemedicine adoption has rapidly accelerated since the onset of the COVID-19 pandemic. Telemedicine provides increased access to medical care and helps to mitigate risk by conserving personal protective equipment and providing for social/physical distancing in order to continue to treat patients [7].

Paradoxically, the pandemic has resulted in a major reorganization throughout the world in how diabetes care is delivered to outpatients [8]. Paradoxically, because, once again, diabetes has been confirmed as model for the management of a chronic disease and because the adoption of Telemedicine for diabetes management has moved from theory to daily clinical practice [9]. In 2012 a Group of Experts suggested “Diabetes provides a pertinent case of chronic disease management with a particular focus on patient self-management. This paper suggests using a six-step cycle for personalized diabetes (self-)management and collaborative use of structured blood glucose data (Fig. 1). E-health solutions can be used to improve process efficiencies and allow remote access. Available evidence about the effectiveness of the cycle’s constituting elements justifies expectations that the diabetes management cycle as a whole can generate medical and economic benefit” [9].

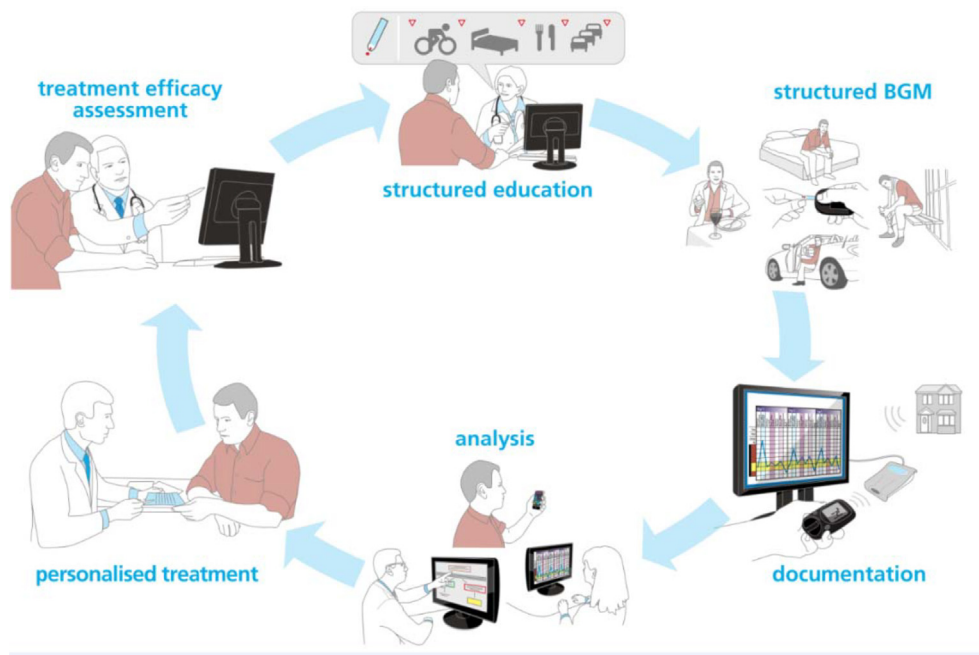
We had to wait for the COVID-19 pandemic for these words to be quickly translated into action. The most impor-

tant evidence is that Telemedicine works and it works in Type 1 diabetes, Type 2 diabetes and, notably, in old people with Type 2 diabetes [10–15]. This last evidence overcomes the idea that Telemedicine is a useful tool only for young persons.

Prior to the COVID-19 pandemic, the use of Tele-health world-wide was quite limited, while during this pandemic many health care professionals have needed to adopt telemedicine expeditiously in their practices while studying the complex and variable issues surrounding its regulation and reimbursement [8]. In the post-COVID-19 era, Telemedicine will likely become an integral part of healthcare delivery, especially for chronic illnesses like diabetes. In fact patients will demand this service as they become comfortable with the technology. Furthermore, e-consults and tele-consults between primary care physicians and specialists will also increase. Similarly, the use of self-reflection, applications and tracking data from glucometers, insulin pumps or sensors can help to enhance the transmission of information between persons with diabetes and their healthcare providers.

This rapid need for Telemedicine visits has generated the demand to effectively educate Health Care Professionals on how to optimize its utilization. Clearly, is it time for a different training of the Health Care Professionals, with Telemedicine use being a mandatory field of their education. However, this will be not enough until Telemedicine will be recognized as tool for the delivery of care and adequately reimbursed. Finally, the development of specific algorithms implemented in the Telemedicine adoption for the management of the disease will surely help.

The “six-step cycle for personalized diabetes management” after twelve years seems never than before very useful for the diabetes management we have in front, whether the COVID-19 emergency will last or not.



**Fig. 1 – A process for personalized diabetes management: details in the text.**

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