



EDITORIAL

Therapeutic education in chronic patients: The diabetes model[☆]



Educación terapéutica en la cronicidad: el modelo de la diabetes

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Chronic diseases (CDs) are long-standing, usually slowly progressing diseases which cause high morbidity and mortality. According to the WHO report, Global Status Report on Noncommunicable Diseases 2010,¹ 63% of deaths worldwide were due to CDs, mainly respiratory and cardiovascular diseases, cancer, and diabetes mellitus (DM). It is estimated that CD-associated mortality will increase due to the increased prevalence and aging of the population. Many CDs share risk factors such as smoking, alcohol consumption, inadequate diet, and sedentary lifestyles. This situation demands new care models for CDs that emphasize the role of the patient/family themselves in the self-management of their treatment(s),^{2,3} although in DM the self-management associated with its treatment has been important ever since the discovery of insulin in 1921.

Diabetes mellitus is a paradigmatic example of a chronic disease that affects all ages and social conditions.⁴ DM requires continued medical care, therapeutic education for the self-management of treatment, prevention, and treatment of associated acute and chronic complications. The most relevant facts in the treatment of diabetes which have improved morbidity and mortality over time have included:

- The discovery of insulin, oral antidiabetic drugs, and antibiotics.
- The impact of structured therapeutic education (TE) (in the 1970s) in both type 1 and type 2 DM on the reduction of hospital admissions associated with serious acute

complications and foot lesions. At that time, the role of nurses in DM care teams, particularly as educators, was also shown.

- In the 1990s, the optimization of metabolic control and intensified treatments on the prevention of chronic complications, as well as the prevention or treatment of cardiovascular risk factors (CVRFs).
- There is now evidence showing that good control has a memory effect.^{5,6} Optimization is therefore required from disease onset, and should be reconsidered as a function of age and/or the presence of comorbidities.

In patients with type 1 DM, the implementation of intensive therapy involves insulin self-administration 4–5 times daily or the use of a continuous insulin infusion pump, as well as 3–4 daily measurements of capillary blood glucose so as to decide which insulin dose should be injected based on blood glucose value, food intake, and physical activity planned. In people with type 2 DM, the use of multiple drugs is a common denominator because most of them have several CVRFs such as high blood pressure and dyslipidemia, amongst others. In addition, the need to follow a healthy diet, with a quantified amount of carbohydrates in each meal, and to perform regular physical activity makes the different modalities of treatment for diabetes highly complex self-administered therapies.

Living with a chronic disease is not easy, and less so when the self-administered drug and non-drug treatment and the self-testing and self-monitoring techniques required are as complex as they are in DM. This, combined with the chronic nature of the disease itself, may lead to psychological, familial, social, and financial costs for the patient, which may significantly interfere with treatment adherence

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and quality of life perception. Hence, the importance of TE,⁷ or self-management education.⁸

TE is an educational process and, as such, depends on biomedical advances in order to decide what to teach and on advances and progress in education sciences to decide how to teach. Educators in DM or other CDs have traditionally "instructed" patients and relatives to help them follow the prescribed treatment. Different pedagogic studies have shown that such information is necessary but not sufficient to persuade patients to change their health behavior. Adherence to any agreement between the professional and the patient also depends on the learning strategies used.

Current teaching trends focus on the "learning process" and on "person-centered care". This means that educators are required to provide the conditions, in terms of knowledge, skills, attitudes and support needed in each case to promote "active reflection, dialog, discussion, and agreement". These are the bases on which patients can be helped to voluntarily change their health behavior, so that they may better manage their disease themselves, instead of their merely "being told" what they have to do. Educators should not only provide quality information, but also knowledge, skills and support, using patient empowerment, helping patients to conduct their own treatment by acting as guides and supports in patient self-management.

Along this line, in 1998⁷ an expert group on diabetes education defined, at the request of the WHO, the TE applicable to diabetes and other CDs as a continuous process and as an integral part of person-centered care. It comprises sensitization, information, education for learning self-management, and psychosocial support in the different situations related to the disease and its treatment. The goal is to help patients and their families to:

- Develop the capacity to self-manage treatment to prevent complications.
- Improve adherence and collaboration with health care teams.
- Be able to live by maintaining or improving the quality of life.

Incorporating this educational role into care practice requires the specific training of health care professionals. Pre- and post-degree programs of the different health care professionals who see people with diabetes should include a minimum training curriculum in TE, as well as more specific post-degree or master training aimed at professionals who are exclusively dedicated to educational functions such as, among others, experienced or advanced role nurses and dietitians, as advocated by different scientific bodies, including the Spanish Society of Diabetes (SED).^{9,10}

Another significant aspect is the planning of structured educational programs which assess the results¹¹ and use quality standards, as promoted by *Diabetes UK*¹² and the *American Diabetes Association (ADA)*. Moreover, the latest revision of the *ADA 2012* quality standards in education includes educational care not only in diabetes care, but also in type 2 prediabetes.⁸

Despite the individual efforts of many professionals, and of endocrinology departments and diabetes units (which work as a team following care schemes that include

structured TE with good results and which may be a reference for CD care), access to TE in DM is globally deficient. The DAWN2 study showed that only 50% of Spanish patients report access to educational activities,^{13,14} and that only 25% of families have participated in them. In addition, educational leaflets continue to be the resource most commonly used by all professionals.

There is thus clear evidence of the importance of TE for the treatment of DM and other CDs, and of the need for specific training, although this is not contemplated in the curricula for the different health care professionals, particularly physicians and nurses. Nor is any officially accredited training on TE in DM or other CDs available. Specific training in TE is not included as a professional requirement for working in the health care of patients with DM or other CDs. TE is not included either in the training of intern and resident physicians in endocrinology and nutrition or of intern and resident nurses. The questions that should be asked are: where is the problem and what are the potential means of improvement?

Overall, the main problems and solutions are related to health care organization and training. Health care organization continues to have a structure which is more focused on acute than on chronic diseases. Breaking down this barrier would be the first step toward the creation of official policies regarding information and therapeutic education that also incorporate patient experience.¹⁵ These policies would help those professionals involved in TE to plan and work with structured educational programs with quality indicators and evaluation of results,¹¹ and to prepare quality information materials in any medium or format. On the other hand, curricula for all degrees in health sciences should include specific training in TE. Addressing these problems could be part of the solution to the provision of improved person-centered care based on clinical and educational evidence.

References

1. World Health Organisation. Global status report on noncommunicable diseases. World Health Organisation; 2010. Available from: http://www.who.int/about/licensing/copyright_form/en/index.html [accessed 10.10.14].
2. Grady PA, Gough LL. Self-management: a comprehensive approach to management of chronic conditions. *Am J Public Health*. 2014;104:e25–31 [accessed 10.12.14].
3. Parekh A, Kronick R, Tavenner M. Optimizing health for persons with multiple chronic conditions. *J Am Med Assoc*. 2014;312:1199–200.
4. American Diabetes Association. Standards of medical care in diabetes 2014. *Diabetes Care*. 2014;14 Suppl. 1:S14–80.
5. Ahmad Kiadaliri A, Clarke PM, Gerdtham UG, Nilsson P, Eliasson B, Gudbjörnsdóttir S, et al. Predicting changes in cardiovascular risk factors in type 2 diabetes in the post-UKPDS era: longitudinal analysis of the Swedish National Diabetes Register. *J Diabetes Res [Internet]*. 2013;241347. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/?term=Predicting+Changes+in+Cardiovascular+Risk+Factors+in+Type+2+Diabetes+in+the+Post-UKPDS+Era> [accessed 10.12.14].
6. Nathan DM, DCCT/EDIC Research Group. The diabetes control and complications trial/epidemiology of diabetes interventions and complications study at 30 years: overview. *Diabetes Care*. 2014;37:9–16.
7. Therapeutic patient education. Continuing education programmes for health care providers in the field of prevention of

- chronic diseases. Copenhagen, Denmark: WHO Working Group: WHO.EURO; 1998.
8. Haas L, Maryniuk M, Beck J, Cox C, Duker P, Edwards L, et al. National standards for diabetes self-management education and support. *Diabetes Care*. 2014;37:S144–53.
 9. Grupo de Trabajo Guías Clínicas y Consensos de la Sociedad Española de Diabetes. Perfil profesional del educador de pacientes con diabetes. *Av Diabetol*. 2012;28:38–47.
 10. Jansà M, Galindo M, Valverde M, Yoldi C, Vidal M, Isla P. Posicionamiento de la Sociedad Española de Diabetes (SED) sobre el perfil curricular y profesional de los profesionales de enfermería expertos en la atención de las personas con diabetes, sus familiares o cuidadores. *Av Diabetol*. 2014;30: 150–5.
 11. Mulcahy K, Maryniuk M, Peeples M, Peyrot M, Tomky D, Weaver T, et al. Diabetes self-management education core outcomes measures. *Diabetes Educ*. 2013;29:768–803.
 12. Diabetes UK. Department of Health. Structured patient education working group: report from the Patient Education Working Group; 2005. Available from: <http://www.diabetes.org.uk/Documents/Reports/StructuredPatientEd.pdf> [accessed 10.12.14].
 13. Nicolucci A, Kovacs Burns K, Holt RI, Comaschi M, Hermanns N, Ishii H, et al. Diabetes attitudes, wishes and needs second study (DAWN2TM): cross-national benchmarking of diabetes-related psychosocial outcomes for people with diabetes. *DAWN2 Study Group. Diabet Med*. 2013;30:767–77.
 14. Jansà M, Galindo ME, Aguilar M, Galindo MA, Orozco D, Llorente I, et al. Diabetes Attitudes Wishes and Needs 2 (DAWN2): results of education, information and support in Spain. 2013 [Abstract PD 0834].
 15. Coulter A, Locock L, Ziebland S, Calabrese J. Collecting data on patient experience is not enough: they must be uses to improve care. *Br Med J*. 2014;348, g2225.