

Role of health care providers in educational training of patients with diabetes

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Abstract. Diabetes mellitus is a high prevalence chronic disease, in which several health care providers are involved in the treatment of patients. Multifaceted professional and organizational interventions that facilitate structured and regular review of patients are effective in improving the process of care. Moreover, patient education and enhancement of role of nurses improve clinical outcomes and process of care. As diabetic management requires strict commitment of the patients, their educational therapy is mandatory. Therapeutic Patient Education (TPE) is a continuous process, integrated in health care; it is a permanent care process, patient-centred, that must be adapted to the evolution of illness and to the patient's lifestyle; TPE must be structured and organized and it should receive benefits from the appropriate pedagogic means. Since the publication of DCCT data it was clear that intensive insulin therapy had been successfully applied only in centers where a diabetologist, a specialized nurse, a dietician, a psychologist and a motivated patient worked all together, i.e. where there was a "team". The team has to follow a pedagogic, multidisciplinary and patient-centred methodology of care. Well structured integration between health care providers may help to avoid the burn-out syndrome. (www.actabiomedica.it)

Key words: Health care providers, team-care, therapeutic patient education

Diabetes mellitus is a high prevalence chronic disease, costly to morbidity and mortality, complex because of the involvement of several health care providers (HCP). The integration of different HCP led to important changes in the medical practice and to creation of new management models, such as "disease management". This is a system of coordinated healthcare interventions and communications for populations with conditions in which patient self-care efforts are significant, as reported by the Disease Management American Association (DMAA). This methodology supports the physician or practitioner/patient relationship and plan of care; it emphasizes prevention of exacerbations and complications utilizing evidence-based practice guidelines and patient empowerment strategies; it evaluates clinical, humanistic and economic outcomes on an ongoing basis with the goal of improving overall health; it tends to show an improve-

ment of clinical results and quality of services offered to the patient in order to ensure expense rationalization (1, 2).

The history of medicine has always been oriented to the model of "acute medicine" which is essentially scientific and technical, aimed to reach a correct diagnosis and to choose the appropriate therapeutic flow-chart. In this model HCP are entirely responsible for the efficacy of the means employed and the patient can do no more than let himself be treated. The acute episode can be brought under control by the articulation of two poles: action on the part of the health care providers/passivity (or passive collaboration) on the part of the patient. This model however is poorly effective in patients with chronic diseases. As medicine evolved to a remarkable level of technical efficacy, practitioners realized the urgent need to improve the treatment of chronic illnesses and to define the new

roles for HCP. In the long term follow-up of patients with chronic disease, biotechnical, psychosocial and pedagogic dimensions must be evaluated (3, 4).

The history of diabetes mellitus treatment is a good lesson of the evolution in strategies for the treatment and management of chronic patients. Four significant phases can be distinguished:

First phase (1921). The discovery of insulin provided a radical solution to a metabolic disorder that until then had been fatal.

Second phase (1945). The arrival of antibiotics made it possible to cure many infections causing severe metabolic decompensations.

Third phase (1972). The entry of therapeutic education and patient education into the field of therapy, thanks to the work of Leona Miller. Leona Miller's study (5), on the effects of educating 6000 patients, led to official acceptance of this approach.

Fourth phase (1993). The organization of patient's follow up as a guarantee of quality of long-term metabolic control.

The American study DCCT as well as other European studies analyzed the effects of diabetes control on incidence and long term progression of complications. These investigations have all shown similar results: i.e. 50% reduction in incidence or progression of diabetic complications. A retrospective analysis of the activities of all these centers showed that, in addition to patient education, the organization of patient's follow up was a determinant factor in the quality of long term metabolic control. These centers had structured their follow up in an optimal fashion, with multidisciplinary teams that included doctors, nurses, dieticians and psychologists (6).

Multifaceted professional and organizational interventions that facilitate structured and regular review of patients are effective in improving the process of care. Moreover patient education and enhancement of role of nurses improve clinical outcomes and process of care (7).

Therapeutic education

Diabetic therapy requires assumption of responsibility toward the patient and educational therapy is the necessary tool to activate this responsibility.

Therapeutic Patient Education (TPE) is a continuous process, integrated in health care; it is a permanent care process, patient-centred, that must be adapted to the evolution of illness and patient's lifestyle; it is part of long-term management of illness; it must be structured and organized and it should receive benefits from the appropriate pedagogic means (8). According to WHO-Europe statement-Copenhagen 1998, TPE is multiprofessional, interdisciplinary and intersectorial (9).

In this concept the care of patients relies upon a multidisciplinary team, usually organized under the leadership of a physician. Each member of the team has specific responsibilities but the whole team contributes to the care of the patients.

Since the publication of DCCT data it was clear that intensive insulin therapy had been successfully applied only in those centers where a diabetologist, a specialized nurse, a dietician, a psychologist and a motivated patient worked all together, that is to say where there was a "team" (6). The optimal application of intensive insulin therapy required great effort of interaction among team members, elaboration of an individualized diet, setting up of appropriate insulin therapy, psychosocial problems solving and good organization of the care itself. The team had to share knowledge, competence and enthusiasm, qualities that are rare to be found in a same person.

At the end of the study the most relevant part of the care was relied upon non-physicians members of the team.

The role of the patient, however, is central: in fact, he/she (and her/his family) must be able to take care of her/himself, to provide to her/his health conditions, to be responsible of her/his care. In this view the patient is a team resource "without cost"(10).

Roles of non-physicians members of the team

The nurse should provide education and training of the patient, teaching him/her all the therapeutic manouvres and giving him/her informations about the prevention of acute complications. She/he has also to plan, manage and realize educational groups and courses, monitoring and improving educational strategies throughout indicators analysis.

Indicators allow to analyze the situation, to identify problems and to improve the quality of care. They are clinical, organizational and educational.

Clinical Indicators (i.e. HbA1c, lipids profile, weight...) are strictly for medical evaluation.

Organizational indicators (i.e. number of participants to educational group/number of recorded patients or number of patients attending at least 60% of the meeting) allow to evaluate if the selection phase and the ability to motivate the patient to attend the course are appropriate or to evaluate the team capacity to involve the patient in the full cycle of the course.

Educational indicators demonstrate through questionnaires the adequacy of technical self control (in administering insulin or solving hypoglycemia episodes ...).

Nurses have also a humanity role in which to treat means more comprehensively "to help to live" with diabetes (11).

Roles of dieticians are to collect the nutritional habits of the patient, compose a personal diet, teach the carbohydrates counting (especially in patients with continuous subcutaneous insulin infusion therapy) and periodically revise diets according to individual needs, physical exercise and glycemetic control.

Psychologists have to help the patients and her/his family to acquire awareness and to identify worries and fears. They should support the patient and her/his family, especially during adolescence when the patient refuse his/her disease; they also have to support other team care members.

All members of team care should be certified diabetes educators (CDE). According to the National Certification Board for Diabetes Educators (NCB-DE), CDE is a health care provider who has successfully passed a written examination ensuring a current and comprehensive background in diabetes education and management. Physicians, nurses, dietitians, pharmacists and exercise physiologists can apply to take the certification exam. To be eligible the candidate must have worked with diabetes patients for at least 2,000 hours or a minimum of two years.

However, the team has to follow a pedagogic, multidisciplinary and patient-centred methodology of care. It's important to achieve an ideal integrated mo-

del among the health care providers to avoid the burn-out syndrome (2).

The concept of the team is not new: already E.P. Joslin thought that at the onset of diabetes, after hospital discharge, the home care nurse was mandatory and in 1925, with Priscilla White, he prepared the first diabetes camp believing that education is not a part of diabetes treatment, but it is the treatment.

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