Prevention of diabetes mellitus is done by increasing medical knowledge about a healthy lifestyle, early identification and reduction of risk factors. The present study is a review of national projects and studies of medical education, appreciates the involvement of experts, authorities and the media in informing the public on diabetes and shows the impact on the population. Although efforts are made to increase the level of medical education, patient compliance with diabetes remains low on lifestyle changes, compliance with treatment, and regular medical visits.

**Keywords:** diabetes mellitus, lifestyle changes, compliance, medical education

**ABSTRACT**
Prevention of diabetes mellitus is done by increasing medical knowledge about a healthy lifestyle, early identification and reduction of risk factors. The present study is a review of national projects and studies of medical education, appreciates the involvement of experts, authorities and the media in informing the public on diabetes and shows the impact on the population. Although efforts are made to increase the level of medical education, patient compliance with diabetes remains low on lifestyle changes, compliance with treatment, and regular medical visits.

**INTRODUCTION**
Chronic diseases, changing of lifestyle related habits and the observance of medical visits program are contexts in which compliance is lowest. Low compliance often leads to poor therapeutic outcomes, increases further investigation and health care costs, decreases the length and quality of life. Patient and disease characteristics, social support and doctor-patient relationship are factors that determine compliance. Age (children, elders), lack of professional training, socioeconomic status, ethnicity, and comorbidities may adversely affect compliance. One of the most common causes of lack of compliance may be misunderstanding instructions. Improving doctor-patient relationship and developing medical education programs can achieve an increased compliance. (1)

One can speak of an improvement of medical education in Romania in recent years through the development of certain national projects. In this review we aim to summarize the main results of the national education programs:

**“Health Education in Romanian schools” National Project implemented in 2002-2003**

1. Promoting health and wellbeing of the student through an optimal somatic, physiological, mental, emotional, social and spiritual functioning and by adopting a healthy lifestyle.
2. Personal development through self-knowledge, building a positive self-image, improving communication and interpersonal relations, stress management and personal career development.
3. Prevention of accidents and health risk behaviours, preventing negative attitudes, interpersonal conflicts, to social inadaptation and situations of crisis.

The health educational curriculum includes modules for classes I-XII.
Although the intention of initiating this program is commendable, it remains an optional subject and the involvement of school committees, teachers, students and parents is low. (2)

**National Program for evaluation of the health status of the population** (Jan. 2007-Dec. 2008) has established the following purposes:

- a) knowledge of the determinants share of the population for diseases with a major impact on the health of its early diagnosis and monitoring of these diseases to avoid premature deaths;
- b) improving population health through prevention, control and monitor disease with a major impact on health;
- c) improved quality of life and prolonging life duration to align with EU standards;
- d) improving access to health services to the entire population of Romania, without discrimination, regardless of its quality of insured/uninsured.

About 60% of the population have attended and more than 150,000 patients have been diagnosed with a chronic illness. Although the objectives of this project were detection and treatment of diagnosed disease, there are many cases where no action has been taken for territorial dispensary of sick people and their treatment. (3)

**National health programs** are an organized grouping of activities and services established by law to prevent and treat diseases with serious consequences on the health of the population and, in some cases (AIDS, TB) with increased epidemiological risk.

On nationwide level 4 programs run:

1. Communitar Public Health Programme;
2. Program for prevention and control of non-transmissible diseases;
3. Program of child and family health;
4. Program of health policy and health administration.

Within the National 1 of the Public Health Ministry in Romania Community program public health for 2006, sub 1.5, health promotion and health education, objective 2, was published a manual entitled “HEALTH PROMOTION AND EDUCATION FOR HEALTH” which is a very useful tool for health promotion in Romania in line with international standards. (4)

Within the National 2 Health Program diabetes is included among non-transmissible diseases, and by this program any person diagnosed with diabetes receives advice and treatment, including medical uninsured patients.

**“Control your Diabetes” National Campaign** aims public information and education about the importance of diabetes prevention and the effective control of diabetes and improving lifestyles for diabetic people. The campaign also aims to involve experts, authorities and media in promoting the message of alarm about the increased incidence and prevalence of diabetes in Romania. The project started in 2011 and reached its ninth edition. Each edition organizes a course of diabetes, activities dedicated to the public, free testing of blood glucose and organizes press conferences to emphasize integrated actions in “Control your Diabetes” National Campaign and disseminate the campaign message locally, but also to give a warning, along with officials involved in the campaign. (5)

**World Diabetes Day - November 14**

World Diabetes Day is held every year on 14 November at the initiative of the International Diabetes Federation (IDF), with support of the World Health Organization. All IDF member associations, health service providers and people with diabetes, this being the largest global information campaign on diabetes, mark this day internationally. Each year, World Diabetes Day focuses on a particular theme. Since 2009, the theme is diabetes prevention and education, the purpose of this event is to provide better information for persons suffering from diabetes, accounting for a way to engage and inform the public in general. (6)

**“And I live healthy!” National Movement** (school year 2013-2014) aimed for children in grades I-IV, with the objectives of preventing childhood obesity and promoting a healthy lifestyle in a holistic approach: mind, body, spirit, also had a reduced applying as time and territory. (7)

**PREDATORR study (Study On National Prevalence of Diabetes, prediabetes, overweight, obesity, dyslipidemia, hyperuricemia and chronic kidney disease in Romania)** started in 2013 and ran for 12 months and aimed to estimate the prevalence of current diabetes mellitus, chronic kidney disease and associated comorbidities (prediabetes, obesity, overweight, dyslipidemia, hyperuricemia, hypertension, metabolic syndrome) in the population. Al-
though is has been an epidemiological study, another objective of it was to initiate a collaboration between professionals involved in disease management and authorities in order to achieve information campaigns on the issue of diabetes. (8)

“Obesity in Romania (ORO) Study – The prevalence of obesity and risk factors of obesity in the adult population in Romania”, organized by the Romanian Association for the Study of Obesity, showed a prevalence of overweight and obesity in Romanians aged between 18 and 79 years, 31.1% and 21.3%. (9)

On April 7, 2016 on the occasion of World Health Day, the central theme was diabetes mellitus. Connected to this, from 5 to 8 April there were organized a series of actions through which the medical personnel wanted to appraise this disease and its consequences. Also, it was taken into account the identification of measures that would lead to a greater degree of awareness of the disease. The first event in this series took place on April 5, 2016, at the Parliament Palace. Thus, representatives of authorities, professionals in diabetes and related areas, and representatives of patient organizations and the media met in the conference on “The issue of diabetes in the Romanian health system: Importance prevention and Health Education”. The event was held under the auspices of the Presidential Administration, the Public Health Committee of the Romanian Senate, Health and Family Committee of the Chamber of Deputies, Romania College of Physicians and the Order of Nurses, Midwives and Nurses of Romania. (10)

MENTOR Study – Nutritional and Metabolic Therapy Outcomes in Romanian Type 2 Diabetic Patients launched in October 2015 and held for a period of 3 years, part of the new strategy for combating diabetes and metabolic diseases. This study aims to analyze the evolution of patients with type 2 diabetes, using the results to educate, to facilitate dialogue with health authorities. Another strategic direction SRDNBM will be optimization of students and young doctors training by increasing of Clinical Nutrition specialty in medical students’ schedule and resident doctors’ curricula of training. MENTOR study aims to assess metabolic control, risk assessment and complications of diabetes and nutritional assessment. (11)

Despite medical education and national programs for screening and treatment of chronic diseases, the level of compliance remains very low. National implementation of these programs is hampered on the one hand by the diminished applicability outside academic medical centres and on the other side by an asymptomatic period of diabetes (type 2) determining the delay initiation of therapy and complications, sometimes irreversible.

In our opinion, the first step in improving primary and secondary prevention of diabetes is to improve patient-family doctor (GP) communication for the following reasons:

- Family Medicine is a Specialty, academic and scientific, clinical predominant, holistic integrative and primary care synthetic oriented.
- GP ensures broad accessibility to the medical act regardless the age, sex or pathology in contrast with the other specialties assisting patients shortlisted by the specialty nature.
- Family Medicine addresses patient both in good health and in disease conditions offering a wide range of services at affordable costs to patients and society. (The family members are often in the same family doctor records that can detect the disease at an early stage of the offspring)
- Family Medicine, by content and services, is central in any system of health care. The GP is a key link between specialists and a good collaborator specialist with continued treatment and monitoring the development of disease. (12)

Other ways of increasing awareness and the level of medical education in schools are implementing mandatory medical education programs, promoting a healthy lifestyle through educational materials and media, early detection and treatment of chronic diseases.

CONCLUSION

Although efforts are being made in the prevention, detection and early treatment of diabetes, the disease is underdiagnosed, treatment medical visits compliance are reduced. It is important to implement and further health programs, periodic evaluation of results at national and local level and increase medical staff to deal exclusively with public education in all areas of the country.
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