

# STUDY ON THE LEVEL OF KNOWLEDGE ON THE OBSERVANCE OF A HEALTHY LIFESTYLE IN PATIENTS WITH DIABETES

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**Keywords:** level of knowledge, diet for diabetes, health education, healthy lifestyle, prevention

**Abstract:** Public health is an index of integrated social development of the country, a reflection of social welfare - economic and moral, a decisive influence on economic potential, cultural and society on employment. Data analysis shows that any diabetic patient in the study do not fully meet the specific dietary pathology, 18.00% of them meet at a rate of 80-90%, about three quarters of respondents say that complies only in the proportion of under 50 and between 50 and 70% this regime. The percentage of 8.00% of patients who claim not to comply with all diet.

**Cuvinte cheie:** nivel de cunoștințe, regim alimentar în diabetul zaharat, educație pentru sănătate, stil de viață sănătos, prevenție

**Rezumat:** Sănătatea populației este un indice integrat al dezvoltării sociale a țării, o reflectare a bunăstării social - economice și morale, un factor decisiv de influență asupra potențialului economic, cultural și asupra forței de muncă a societății. Analiza datelor arată faptul că nici un pacient diabetic luat în studiu nu respectă în totalitate regimul alimentar specific patologiei, 18,00% din ei respectă în proporție de 80-90%, aproximativ trei sferturi din chestionați declară că respectă doar în proporție de sub 50 și între 50 și 70% acest regim. Este de remarcat ponderea de 8,00% a pacienților care susțin că nu respectă deloc regimul alimentar.

## INTRODUCTION

Public health is an index of integrated social development of the country, a reflection of social welfare - economic and moral, a decisive influence on economic potential, cultural and society on employment.

The policy "Health for All in the 21st Century" adopted worldwide in 1998, aims that everyone on the planet to be healthy, as agreed at Alma-Ata Conference since 1978.

For the first two decades of the 21st century global reports were defined and objectives that will create conditions for people worldwide to achieve the highest possible level of health and to maintain this goal.

The policy "Health for All in the 21st Century" for WHO European Region aims to achieve full health potential for all individuals by: promoting and protecting people's health throughout life, reduce the incidence of sufferings due to major diseases.

Three basic elements make up the ethical background: health as a fundamental human right, equity in health (there must be solidarity between countries or between population groups that undertake actions to achieve this goal), participation and empowerment of individuals, groups, communities, institutions Organizations and sectors for health development.

By 2020 the current gap in health between the Member States of the European Region should be reduced by at least one third. Should be reduced by at least 30% difference between European countries in terms of life expectancy, given that one third of them have very high values, and another third very small values

Indicator values should be lower morbidity and mortality that by improving the situation of the less pronounced.

Among the main objectives of the WHO also found that on reducing non-communicable diseases including diabetes and is also where the incidence of diabetes complications (amputation, blindness, renal failure, etc..) Should be reduced by one third.

Diabetes mellitus is a chronic disease caused by factors such as hereditary and environmental factors. It is a complex and heterogeneous syndrome, genetic disorder or gained induced secretion of insulin and / or peripheral resistance to its action. It is characterized by disturbing the carbohydrate metabolism, lipid, protein, electrolytes and vitamins.

Insulin deficiency causes elevated levels of glucose in the blood, which affects many body systems, including a special place circulatory and nervous system.

Diabetes, both type I and type II, can occur at any age, but the primary insulin-dependent diabetes typically appears before the age of 35-40 years. The whole world is experiencing a pandemic of type 2 diabetes, due to westernization of lifestyle, aging population, urbanization, which result in changes in diet, adopting a sedentary lifestyle and obesity development.

## THE THEME MOTIVATION

Following the National Program Health Status Assessment for our country, it was found that the percentage of those affected by diabetes is much higher and increased from 3.5% to 8%.

According to International Diabetes Federation, Romania, the prevalence in 2003 was 9.3% (in July 2003 were registered in Romania, 420,000 persons with diabetes, of which 75,000 need treatment with insulin), and in 2025 the prevalence will be 10.6%.

In Romania, every year are diagnosed with diabetes

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more than 50,000 people, and 5% of the Romanian confirmed diabetes.

A patient with diabetes without chronic complications may be considered a "healthy diabetic" under the category of patients with "low costs" of care. Conversely, the occurrence of chronic complications increases greatly decreases the cost of care and quality of working life. Complications from diabetes include: diabetic nephropathy, diabetic retinopathy, diabetic neuropathy, diabetic gangrene and leg amputation, coronary heart disease and cerebrovascular disease, all leading to damage health and lower quality of life of diabetic patients.

Among the serious and costly chronic complications of diabetes such as heart disease, renal failure and blindness, foot complications are the largest share: 40-70% of lower limb amputations due to diabetes, while 85% are shown of ulceration.

The most important factors leading to ulceration is peripheral neuropathy, minor trauma and foot deformation.

In a broad sense, the term "diabetic foot" includes all disorders that manifest in the feet. Effect on diabetic foot patient is one of the most frequent causes of hospitalization in this group.

Diabetic neuropathy affects up to 85% of all patients, about arteriopathy. 15%. These two disorders are the main causes underlying trophic lesions known generic term "diabetic gangrene.

The subject is of great interest as between 10 and 20% of patients with diabetes during their lifetime trophic lesion, about half of them ending in surgical services. Most of the latter (ca. 75%) leads to a conservative surgery or with a minor amputation (toes) and medium. Unfortunately, a large percentage of patients still inside the surgical phase (about 25%) have a major amputation (calf, thigh). Bilateral thigh amputation is still a reality, dramatic and embarrassing for the patient care system of these patients. The number of such cases was limited further by the development and expansion of vascular surgery.

Changing this registry pessimistic, we must not forget that of all the chronic complications of diabetes, amputation, which is a direct consequence of the complex pathogenic said is a resultant avoidable in most cases.

The main preventive methods relate primarily to the proper education of patients with diabetes on the risks faced by a person with a drop or even a loss of sensitivity to stimuli, nociceptors, thermal, mechanical or chemical.

In order to improve the situation to reach a higher standard of quality of life in this category of population and the desire to engage in actions to bring real help to this population, I proposed to assess the level of knowledge on compliance to a healthy lifestyle patients diagnosed with diabetes mellitus who require both compliance with a specific diet and careful monitoring of disease evolution, and a continuing medical education, customized diabetic pathology, all in order to prevent complications and decreased quality of life of this category of high consumers health services.

**MATERIAL AND METHOD**

We developed an original work questionnaire, anonymously, with pre-formulated answers, testing knowledge about compliance with a healthy lifestyle in patients with diabetes mellitus.

In the first part of the questionnaires were developed questions on the identification and characterization of the studied group, followed by questions on frequency of physician referral to diabetes and the family doctor, the reasons presented to them, respecting the patient's specific food diabetic diet reasons for its failure, the possible presence injuries to the legs, the story of their physician or family doctor to receive

information from your GP on the importance of diet and specific treatment of diabetes and compliance with a healthy lifestyle in preventing injuries to the legs, the frequency of compliance rules foot hygiene, knowledge of risks that can lead to leg amputation in patients with diabetes, why not aware of these risks and sources of information on this aspect.

Also, the questionnaire contained questions about the stance taken in the event of an injury to the feet, and according to the degree of involvement of family physician supervision, monitoring and education of patients with diabetes, and people should be involved in these actions.

The study was conducted on a total of 50 people from Sibiu, diagnosed with diabetes. Patients who applied the questionnaires and were given consent to participate in the study, fully respecting the ethics of scientific research. There were no recorded cases of non-completion questionnaires.

**RESULTS AND DISCUSSIONS**

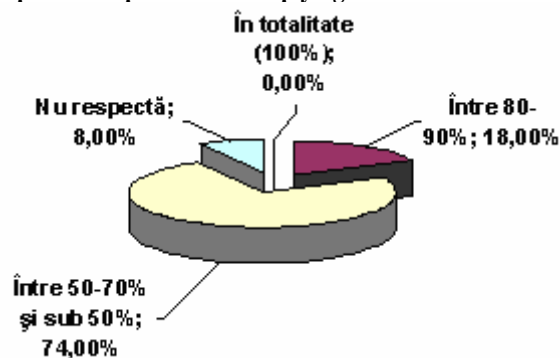
In the study group patients aged 18-65 years and over, over half of them are males, 57.41% from urban areas, the largest share of the respondent over 10 years of being diagnosed with diabetes.

Over half of respondents say they go to consult a specialist in diabetes doctor every three months. Most of the respondent states that it has only rarely and often the family doctor for a consultation, the reasons for which patients go to the family doctor was treating acute, or compensated for issuing free prescription and certain medical acts.

Data analysis shows that any diabetic patient in the study do not fully meet the specific dietary pathology, 18.00% of them meet at a rate of 80-90%, about three quarters of respondents say that complies only in the proportion of under 50 and between 50 and 70% this regime. The percentage of 8.00% of patients who claim not to comply with all diet. (Figure no. 1.)

The data analysis plotting 2 state that the main reason - 34.78% - to argue that patients do not comply diabetic diet is socio-professional activity, intense financial ground is placed in Tier II, with a weight of 32.61, and 19.57% of patients say they can not raise any plausible reason. The percentage of 8.70% of patients who claim to have no knowledge of how diet, therefore placing it in Tier IV, which may indicate both a low level of knowledge of diabetic patients in the study take on this issue and a low degree of involvement of medical staff in the implementation of an intensive and continuous counseling and education for lifestyle improvement in this category of patients.

**Figure no. 1. The share of respondents according to the proportion of patients in complying with the diet**



Analysis following graphic shows that only a share of 12.00% of patients taking the study always tells during a visit to the doctor, symptom occurring in the feet, the largest share - 58.00% - argues that only sometimes discussed these issues with your doctor, and a high percentage of subjects - 30.00% - never discuss with your doctor about this. (Figure no. 3)

Figure no. 2. The share of respondents depending on the reasons patients partial or no compliance with diet

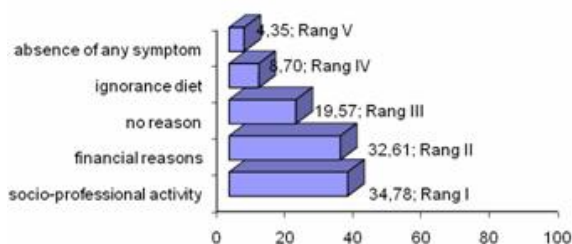
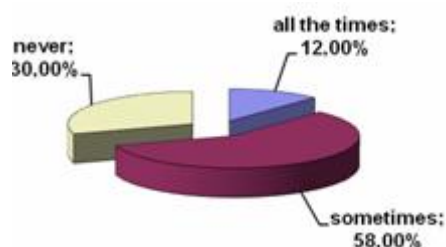


Figure no. 3. Share of patients according to the story questioned during a visit to the doctor, the symptoms of the legs



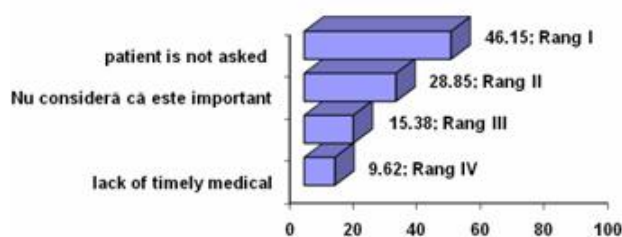
It is noted that the responses of patients questioned about the reasons for which the family doctor any symptom reports occurred in the legs, holds the largest share that the patient was not asked, which may indicate poor involvement of family doctor diabetic patient monitoring and education. (Figure no. 4)

It is worth mentioning that a high percentage - 28.85% - one holds that diabetic patients taking the study does not consider that this is important with all that data in the literature shows that: one serious and costly complications of chronic of diabetes such as heart disease, renal failure and blindness, foot complications are the largest share: 40-70% of lower limb amputations due to diabetes, while 85% are preceded by ulceration.

The most important factors leading to ulceration is peripheral neuropathy, minor trauma and foot deformation. In a broad sense, the term "diabetic foot" includes all disorders that manifest themselves in the feet. Effect on diabetic foot patient is one of the most frequent causes of hospitalization in this group. (44, 50)

A share of 15.38% are of the opinion that discuss the problem symptoms in the legs with your family because they lack enough time, and 9.62% say that family doctors are not given enough time to address and this topic. (Figure no. 4)

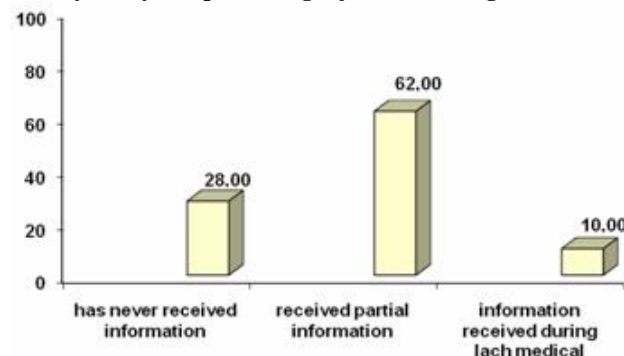
Figure no. 4. Share of surveyed patients depending on the reasons for which no reports during a visit to a family doctor, symptoms of leg



Of the 50 patients in the trial taking only a share of 10.00% stated that they received at each medical visit, information from family doctors on the importance of diet and

specific treatment of diabetes and compliance with a healthy lifestyle in preventing injuries in the feet and the largest share, representing 62.00% said they had received such information only sporadically. The percentage of subjects raised by 28.00% of respondents who say that family doctors have not made aware of the importance of the specific pathology of diabetic diet and the need to respect and maintain a healthy lifestyle for prevention emergence of "diabetic foot". (Figure no. 5)

Figure no. 5. Share of patients questioned by receiving information from family doctors on the importance of diet and specific treatment of diabetes and compliance with a healthy lifestyle in preventing injuries in the legs

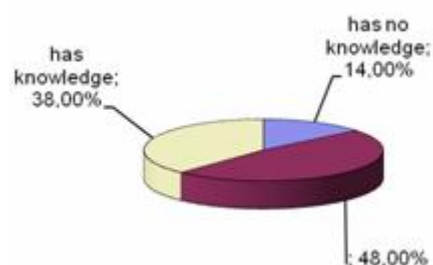


Survey data show a low level of knowledge of the patients surveyed on foot hygiene rules, a matter which includes inspection, cleaning, linen use appropriate only a share of 32.00% of the subjects performed their daily foot hygiene.

Given that diabetic neuropathy affects up to 85% of all diabetic patients and about 15% arteriopathy, these two disorders are the main causes underlying trophic lesions known generic term "diabetic gangrene" (44, 50), patients diagnosed with diabetes should be continuously informed about the risks that may favor the occurrence of these complications that generates leg amputation.

The data analysis is to note the high percentage - 62.00% - of patients who claim they do not know (14.00%) or that they are only partial (48.00%) on the risks that can lead to complications in pathology and which entail surgery resulted in lower limb amputees. (Figure no. 6)

Figure no. 6. Share of surveyed patients according to their knowledge of the risks that can lead to diabetes foot amputation

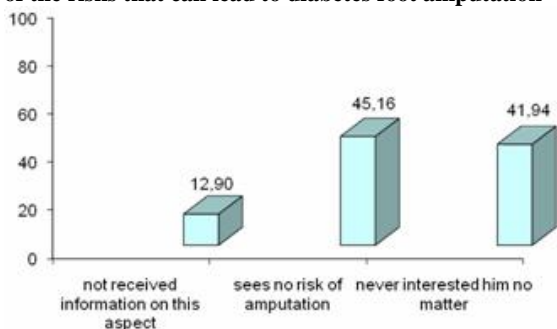


All three patients taking pleas in the study, the ignorance of the risk factors that may lead to lower limb amputations - has not received information on this subject (12.90%) sees no risk of amputation (45, 16%) not interested in the subject (41.94%) - may suggest both the low level of their knowledge on the prevention of complications of diabetes and poor health professionals involved in the education of patients diagnosed with diabetes. (Figure 7)

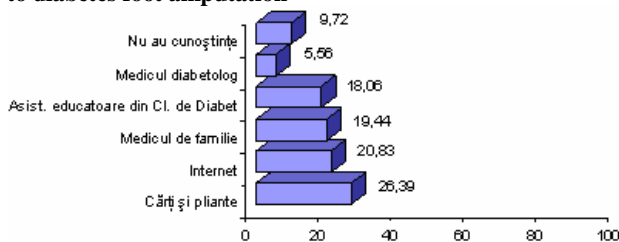
The answers given by patients taking the study of knowledge about the source of information about risk factors

that can cause leg amputation in patients with diabetes, located in Tier I books and leaflets which address this issue (26.39%), followed in rank II Read information on the Internet (20.83%), information received from the family doctor (rank III - 19.44%) and nurse educators from the Diabetes Clinic (rank IV - 18.06%), and rank V , accounting for 5.56% of the responses we find diabetes information received from the doctor. (Figure 8)

**Figure no. 7. Share of surveyed patients depending on the reasons for not knowledge, that have only partial knowledge of the risks that can lead to diabetes foot amputation**



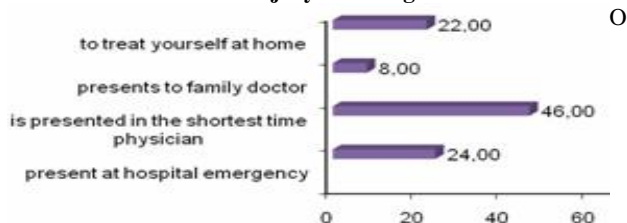
**Figure no. 8. Distribution of interviewed patients with the source of information to the knowledge of risks that can lead to diabetes foot amputation**



Share of patients questioned by the stance taken in the event of an injury to the legs shows that the largest share - 46.00% - say that they appear as soon as the doctor, a share of 22.00% is held by the stating that it presents to the hospital - the emergency and 8.00% of patients taking the study argue that it presents to the family doctor.

The percentage of 24.00% of those who declare that they treat themselves at home, which is not advisable, because alone can not appreciate the seriousness of many injuries have occurred and the medical knowledge to decide the optimal treatment and efficiently as lesions became imminent risk of complications and may lead to the need for surgery. (Figure no. 9)

**Figure no. 9. Share of patients questioned by the stance taken in the event of an injury to the legs**



f patients surveyed opinion on the degree of involvement of family physician supervision, monitoring and education of patients with diabetes found that only a share of 10.00% of respondents considered that their family doctor make a satisfactory contribution to this and share majority of subjects, representing 90.00%, expresses dissatisfaction, considering that family doctors are involved only very little, if any surveillance,

monitoring and educating patients with diabetic disease.

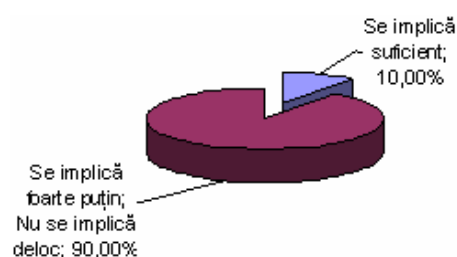
Lack of involvement of family physician care and education for the chronically ill, diabetics in general and in particular, can generate the appearance of complications and decreased quality of life of this population.

Because most care for the chronically ill is given in primary care, chronic disease model is actually a rethinking of how primary care is organized for this type of service. The purpose of the reorganization of services provided Chronicles is to provide the most efficient and equitable care and quality time (with supporting scientific evidence) for all patients. At the same time, care should be organized to provide and individualized responses to complex needs of each patient. [3.10]

In the family medicine cabinet, the best results can be taken only when patients interact informed and involved in their care and responsibility of the MOF team prepared for each meeting with the chronic patient.

Four key elements influencing decisive results in support for self-care, care delivery model, decision support and clinical information systems. Are important but the health system and community.

**Figure no. 10. Share of patients surveyed in opinion depending on the degree of involvement of family physician supervision, monitoring and education of patients with diabetic**



Patients share the view of respondents depending on the causes of insufficient involvement of the family doctor in controlling disease in patients with diabetes, shows that the total replies to 50.00% indicating insufficient knowledge of the family doctor for treatment in diabetes education, 19 , 23% of the responses shows health disparities in the current legislation the special needs of diabetic patients, accounting for 17.31% of the responses shows that insufficient time family physician involvement lead to inadequate supervision, monitoring and education of patients with diabetic and 13.46% of the responses shows that lack of financial resources, leading to poor endowment of family medicine cabinets - for example the meter - it causes your family doctor to take a less interest in these issues. (Figure 11)

**Figure no. 11. Patients share the view of respondents depending on the causes of insufficient involvement of the family doctor in controlling disease in patients with diabetes**



Graphic analysis of data shows that in the opinion of 12 patients interviewed, the doctor tops diabetes, accounting for 44.59% of total responses, among people who should be actively

involved in monitoring implementation and continuous education diabetic patients in equal shares by 14.86% is the family doctor, that the family as important factors in making this issue and a share of 25.68% of the answers given by respondents, shows that patients consider that the achievement monitoring and education of diabetic patients should be actively involved a team of diabetes doctor, family physician, nurse educator in the Diabetes Clinic, including patients and patient family. (Figure 12)

No graphical data analysis. 13 shows felt but unexpressed need for diabetic patients to a multi-sectoral teams to be actively involved both in monitoring and supervision of pathology, as continuing their education and thus the largest share of respondents - 88.00% - say that the involvement of this team in the management of their pathology would bring many benefits (40.00%) and more (48.00%).

**Figure no. 12. Patients share the view of respondents depending on people who should be actively involved in implementing monitoring and education of diabetic patients**



### CONCLUSIONS

1. In the study group patients aged 18-65 years and over, over half of them are males, 57.41% from urban areas, the largest share of the respondent being diagnosed with diabetes for over 10 years.
2. Over half of the respondents say they consult a specialist in diabetes every three months.
3. Data analysis shows that any diabetic patient in the study do not fully meet the specific dietary pathology. The percentage of 8.00% of patients who claim not to comply with all diet.
4. The main reason that patients claim not to comply diabetic diet socio-professional activity is intense, the financial reason is placed in Tier II and 19.57% of patients say they can not raise any plausible reason. The percentage of 8.70% of patients who claim to have no knowledge of how diet, therefore placing it in Tier IV, which may indicate both a low level of knowledge of diabetic patients in the study take on this issue And a low degree of involvement of medical staff in the implementation of an intensive and continuous counseling and education for lifestyle improvement in this category of patients.
5. Only a share of 12.00% of patients taking the study reports, always visit the family doctor, any symptoms or injuries occurring in the legs.
6. It is noted that the responses of patients questioned on why the family doctor tells not any symptoms or injuries occurring in the legs, holds the largest share that the patient was not asked, which may indicate involvement of the poor doctor family in monitoring and educating the diabetic patient.
7. It is worth mentioning that a high percentage - 28.85% - one holds that diabetic patients taking the study does not consider that this is important, which may suggest a low level of knowledge of respondents on complications pathology.
8. The percentage of subjects raised by 28.00% of respondents who say that family doctors have not made aware of the importance of the specific pathology of diabetic diet and the need to respect and maintain a healthy lifestyle for prevention emergence of "diabetic foot".
9. Approximately two thirds of patients say that they do not know

or that they are only part of the risks that can lead to complications in the pathology and surgery entail causing lower limb amputations.

10. All three patients taking pleas in the study, the ignorance of the risk factors that can lead to amputations to both legs that suggest a low level of their knowledge on the prevention of complications of diabetes and poor health professionals involved in education of patients diagnosed with diabetes.
11. Source of information of knowledge about risk factors that can cause leg amputation in patients with diabetes, located in Tier I books and leaflets which address this issue, followed in rank II read information on the Internet, the information received from GP (class III) and nurse educators from the Diabetes Clinic (rank IV), and rank V, with a weight of only 5.56% of the responses we find diabetes information from the doctor.
12. The percentage of 24.00% of those who declare that they treat themselves at home in case of an injury to the feet, which is not advisable, because alone can not appreciate the seriousness of many injuries have occurred and the medical knowledge to decide the most optimal and efficient treatment, as lesions became imminent risk of complications and may lead to need surgery.
13. Share majority of subjects, representing 90.00%, expresses dissatisfaction with the level of GP involvement in supervising, monitoring and educating patients with diabetic disease.
14. Half of the responses given by patients, the reasons for dissatisfaction with the degree of involvement of the family doctor, indicating insufficient knowledge of the family doctor of education in diabetes mellitus therapy, about one fifth of patients show that motivate non-involvement as a family doctor is concerned mismatch current health legislation diabetic patient with special needs, followed by the family physician was insufficient time and lack of financial resources for medical service provision.
15. The opinion of patients surveyed reported that among people who should be actively involved in carrying out monitoring and education of diabetic patients, diabetes doctor tops, followed by the family doctor, that patient's family and a team of diabetes doctor, family physician, nurse educator in the Diabetes Clinic, including patients and patient family.
16. Study shows need for diabetic patients felt but unexpressed a multi-sectoral teams to be actively involved both in monitoring and supervision of pathology, as continuing their education and thus the largest share of respondents claiming that this team involvement in the management of their pathology they and would benefit many more.

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