

Research Article

## THE OPINION OF THERAPISTS AND SPECIALIZED DOCTORS ON THE PROVISION OF MEDICAL ASSISTANCE OF PATIENTS WITH TYPE 2 DIABETES IN POLYCLINICS IN ALMATY

AYGUL TAZHIYEVA<sup>1\*</sup>, VITALY REZNIK<sup>2</sup>, ZHAN ABYLAYULY<sup>3</sup>, GULZHANAT KUTTYKOZHAYEVA<sup>4</sup>

<sup>1</sup>Department of Epidemiology, Evidence-Based Medicine and Biostatistics, Kazakhstan Medical University "KSPH", Almaty, Kazakhstan.

<sup>2</sup>Department of Biomedical Statistics and Evidence-Based Medicine, Al-Farabi Kazakh National University, Almaty, Kazakhstan.

<sup>3</sup>Department of Endocrinology, Asfendiyarov Kazakh National Medical University, Almaty, Kazakhstan. <sup>4</sup>Department of Science and Innovation, Asfendiyarov Kazakh National Medical University, Almaty, Kazakhstan. Email: luna\_1120@mail.ru

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### ABSTRACT

**Objective:** The objective of this research was to study the opinion of therapists and highly specialized doctors (cardiologist, neuropathologist, and oculist) in Almaty polyclinics on the provision of endocrinological care for patients with type 2 diabetes.

**Methods:** The sociological study was conducted on the basis of a specially developed questionnaire. The questionnaire consisted of 23 questions. The database was created in the Microsoft Access 2010 program. Statistical processing of data was carried out using the SPSS 22.0 software package. The average relative values have been calculated with the value of their standard error.

**Results:** Most patients with type 2 diabetes mellitus are observed in primary health care by therapists and endocrinologists. According to 86.7% of therapists, the number of patients with diabetes exceeds the number of registered patients and the determination of blood glucose level in the daily practice of therapists will reveal a large part of them. Most of the interviewed doctors believe that they have difficulties in servicing patients due to the presence of concomitant disease in patients, low adherence of patients, and a narrow choice of drugs for treatment. According to the opinion of doctors of different specialties (endocrinologists, cardiologists, neurologists, and oculists), when examining patients with type 2 diabetes, complications from the cardiovascular system, nervous system, and organ of vision are identified.

**Conclusion:** The organization of outpatient care for patients with type 2 diabetes mellitus should be interrelated by therapists and cardiologists, neurologists, and ophthalmologists. It should be based on continuity and interdisciplinary approach and is aimed to ensure patient satisfaction with the quality of care and adherence to treatment and to improve the quality of life.

**Keywords:** Primary care, Type 2 diabetes, General practitioners, Specialists.

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### INTRODUCTION

Today, there are about 451 million people with diabetes in the world, and by 2045, the number of people with this disease will increase to 693 million, while the national cost of diabetes per year is 850 billion US dollars [1]. Annually, 4 million people die from diabetes due to cardiovascular disease [2], and the costs of treating a diabetic patient increases by 60–90% as the vascular problems progress [3]. According to the National Health Service (NHS), the UK spends £ 9.8 billion annually (up to 80% of costs) for treating complications of diabetes [4]. The Berlin Declaration notes that "The policy currently implemented in relation to diabetes and its complications are not sufficient to solve this problem at its root" and stresses the need to maintain and strengthen health at the primary level in the context of primary health care, as described in the Alma-Ata Declaration. The Berlin Declaration acts as a global call for action by all countries on diabetes and identifies four main strategies that are measurable and internationally applicable: Disease prevention, early detection, timely monitoring, and access to appropriate health services.

The above mentioned four directions cover the whole range of primary health care, as described in the Alma-Ata Declaration [5-7]. Maintaining adequate glycemic control in patients with diabetes is necessary to prevent micro- and macrovascular complications and premature death [8]. In connection with the ever-increasing number of people with diabetes and the lack of endocrinologists, [9] in the context of primary health care, general practitioners carry out diabetes management while endocrinologists manage just 20% of the patients. [10]. Family doctors play a significant role in the treatment of patients with diabetes, in changing their lifestyle and preventing complications [11,12].

Diabetes management is, especially, difficult in primary health care due to the need for significant resources and the necessary knowledge of specialists. Questionnaires were completed by 362 family physicians (79% response rate). And as surveyed by family doctors, only 9% refer their patients with diabetes to secondary care [13]. The American Association for the Study of Diabetes in 2018 published standards for the provision of medical care for diabetes, based on evidence-based recommendations aimed at managing risks, in particular, cardiovascular diseases, including hypertension, integration of new technologies in diabetes management, and screening in a group increased risk [14]. The review [15] found that multicomponent professional interventions (e.g., audit and feedback, decision-making by consensus and peer review, central computerized tracking systems, and nurses who regularly contacted patients) can improve the effectiveness of the provided medical services to patients with diabetes.

### MATERIALS AND METHODS

#### Materials

The sociological study was conducted on the basis of a specially developed questionnaire. The questionnaire consisted of 23 questions. The database was created in the Microsoft Access 2010 program. Statistical processing of data was carried out using the SPSS 22.0 software package. The average relative values have been calculated with the value of their standard error.

### RESULTS AND DISCUSSION

A survey of doctors was conducted in almost all polyclinics in Almaty. The number of specialists in polyclinics varied. There could

be two specialists or no doctors at all. 105 doctors who agreed to be interviewed included 30 therapists, 22 cardiologists, 25 neurologists, and 28 oculists. When determining the sample size, a possible error might have occurred, not exceeding 5%. Respondents are informed about the purpose of the study and are aware of its anonymous and voluntary nature.

A total of 30 therapists took part in the survey, 90.0% of whom were women and 10.0% were men. According to the age distribution, the respondents aged 40-49 represented the largest proportion (43.3%). Among the surveyed therapists, the number of specialists with 2-5 years of professional service prevailed (56.7%). Therapists with the highest qualification grade made up 40.0%, those without a qualification grade approached to 26.7%, the number of specialists with the first qualification grade was equal to 23.3%, and those with the second qualification grade constituted 10.0% of total as mentioned in Table 1.

Table 1: Personal details of the respondents

Characteristics	Absolute number	% κ "Total," $\bar{X} \pm \sigma \bar{x}^a$
Gender		
Male	3	10.0±5.48
Female	27	90.0±5.48
Total	30	100.0±0.0
Age		
Under the age of 30	2	6.67±4.55
30-39 years old	6	20.0±7.30
40-49 years old	13	43.3±9.05
50-59 years old	9	30.0±8.37
60-69 years old	-	-
Over the age of 70	-	-
Total	30	100.0±0.0
Length of service in the profession		
Under 1 year	2	6.67±4.55
From 2 to 5 years	17	56.7±9.05
Over 5 years	9	30.0±8.37
Over 10 years	2	6.67±4.55
Total	30	100.0±0.0
Possession of qualification grades by the specialists		
I qualification grade	7	23.3±7.72
II qualification grade	3	10.0±5.48
The highest qualification grade	12	40.0±8.94
No qualification grade	8	26.7±8.07
Total	30	100.0±0.0

<sup>a</sup>Mean±SD

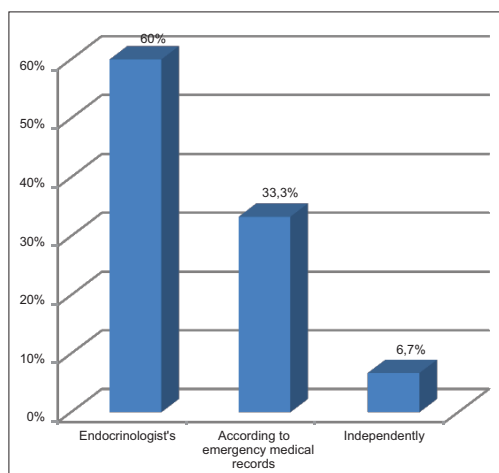


Fig. 1: Encounter of patients with type 2 diabetes to the therapists by the referral from other specialists

In most cases, patients with type 2 diabetes come to the therapists by the referral from the endocrinologist constitute 60.0%, the percentage of patients by the records of emergency medical care is amounted to 33.3%, and those who come independently comprise 6.7% (Fig. 1).

As 86.7% of therapists think on the question of the need to determine the level of blood glucose in the routine practice of therapists, it will be possible to identify the majority of cases of type 2 diabetes at an early stage, whereas 13.3% of specialists responded negatively (Fig. 2). 100% of the respondents responded negative to the question: "Is there a glucose meter in the office?".

In the view of 53.3% of therapists, the use of screening scales and questionnaires will allow to timely detect complications of type 2 diabetes. At the same time, 26.7% of therapists believe that timely preventive examinations (eye and leg examinations) will make it possible to identify these complications in a timely manner, and only 13.3% of therapists presume that the introduction of an interdisciplinary approach will help in identifying complications of diabetes mellitus and the number of some other methods used for this purpose is amounted to 6.7% (Fig. 3).

According to the opinion of 33.3% of therapists, when advising patients with type 2 diabetes, difficulties arise due to the presence of concomitant disease, 30.0% of therapists consider low adherence of

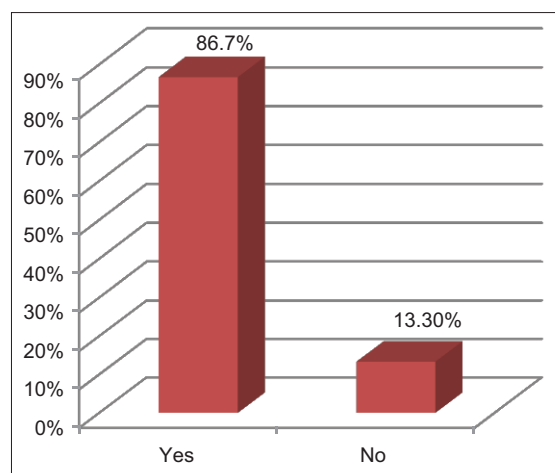


Fig. 2: The opinion of therapists on the determination of blood glucose level in routine practice

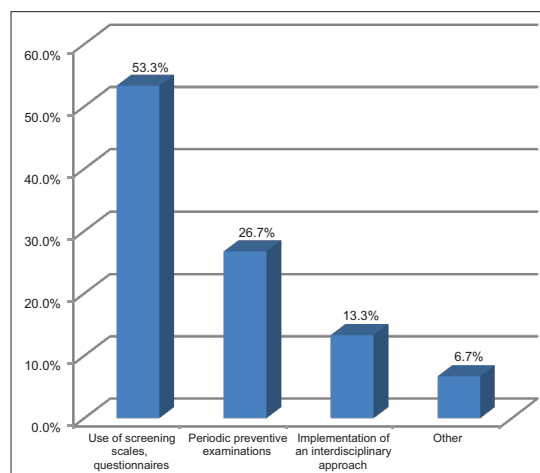


Fig. 3: The opinion of therapists on the measures to identify complications of type 2 diabetes









