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QUALITY OF MEDICAL CARE PROVIDED TO CHILDREN WITH TYPE 1 DIABETES MELLITUS

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Annotation. *Improving the quality of medical care is an urgent task of healthcare in the Republic of Uzbekistan. According to Law No. 323-PK dated November 21, 2011 "On the fundamentals of protecting the health of citizens in the Republic of Uzbekistan," ensuring the availability and quality of medical care is one of the fundamental principles of protecting public health. The quality of medical care is a set of characteristics that reflect the timeliness of medical care, the correct choice of methods of prevention, diagnosis, treatment and rehabilitation in the provision of medical care, and the degree to which the planned result is achieved. Improving the quality and accessibility of medical care for children with endocrine diseases is the main goal of the Alpha-Endo program. The program is implemented by the KAF Foundation for the Support and Development of Philanthropy (hereinafter referred to as the KAF Foundation) with the financial support of Alfa Group. The main partner of the program is the Federal State Budgetary Institution "Endocrinological Research Center" (hereinafter referred to as the ENDS) of the Ministry of Health of Uzbekistan.*

Purpose of the study— determine the necessary strategies to improve the quality of medical care for children with endocrine diseases.

Research material. The study was carried out in the Samarkand branch of the Russian Scientific Research Center for Economics and Economics. The importance of the participation of public and socially oriented non-profit organizations in independent assessment of the quality of work of institutions providing social services is noted in Decree of the President of the Republic of Uzbekistan No. 188 dated May 7, 2020 "On measures for the implementation of state social policy." The study can be classified as a special type - an audit of medical care. A clinical audit is a well-designed study that evaluates the resources, process, and outcomes of health care with the goal of improving the quality of health care [1–5]. The resources being assessed include: material resources (equipment, equipment, medicines, etc.); intellectual resources (professional competencies, specialist training system, methodological base, information systems, etc.) and numerical personnel potential. The process refers to the provision and receipt of

health care, such as medical practices used, referral to health care facilities, and organizational aspects. Outcome is the qualitative or quantitative impact that a healthcare system has on the health of patients. The outcome assessment includes both main indicators, such as quality of life, morbidity (including the development of complications of the underlying disease), disability and mortality, and intermediate indicators (achievement of certain target clinical indicators, patient adherence to medical recommendations, etc.) . The protocol was discussed with federal and regional experts. All research materials were pre-tested. The materials and methods of the Alpha-Endo study are indicated. The audit included a survey of 221 parents of children with type 1 diabetes mellitus (T1DM), an analysis of 224 medical histories, interviews with 131 doctors, and an assessment of 45 medical organizations in 6 regions. The average age of children with T1DM, whose parents were interviewed about the child's disease, was 10 years (range 2 to 18 years), the average duration of T1DM was about 4 years (range 1 year to 14 years), approximately 60% were girls. The selection of parents to participate in the interview was carried out in accordance with the study protocol. To include parents in the study, the following criteria were used: - presence of a child aged 1 to 18 years with T1DM, diagnosed at least 1 year before the start of the study; — those who sought any medical assistance during the study (for a prescription, routine or inpatient medical care); - degree of relationship - mother or father/guardian who permanently lives with the child (preferably mothers, who usually take care of children to a greater extent); — who voluntarily agreed to answer research questions; — citizens of the Republic of Uzbekistan permanently residing in the study region, at least 30% from regional centers, small towns or villages. The survey was conducted by specially trained interviewers - regional medical workers, not directly involved in providing assistance to the child whose parents participated in the study. More than 10% of interviews with parents were conducted by experts during their visits to the regions. There were no significant differences between the survey resultsconducted by regional specialists and members of expert groups. Processing and analysis of statistical data was carried out in SPSS v.14.0 and MSExcel 2007. Assessment of the presence of relationships and degrees of difference between different groups of respondents in each case was carried out using the chi-square test. The choice of the critical significance level ($p=0.025$) was based on the sample size (more than 200 but less than 500 respondents). In order to prove the statistical significance of the differences between the two groups of respondents, a “null hypothesis” (H0) was formulated for each case, suggesting that there are no such differences. The hypothesis was tested by calculating the $\chi 2$ correspondence criterion. The obtained $\chi 2$ value was compared with the table value (table of critical points of the Pearson chi-square distribution). In order to refute the “null hypothesis”, the calculated compliance criterion must be equal to or greater than the tabulated (critical) value $\chi 2$ at the significance level ($\alpha = 0.025$), which gives grounds to refute the “null hypothesis” and talk about the presence of a relationship between the events under study. The study

used standard international requirements for obtaining, storing and analyzing information. Protocol and all others

Scope of study. Research material Scope of the study Analysis of medical statistics (completed cards) Data from official regional statistics for 2013, provided by research coordinators Interviews with medical workers providing care to children with endocrine diseases (completed questionnaires) Interviewed: pediatric endocrinologists - 48; district pediatricians - 83. Study of outpatient records selected by random sampling by external experts during visits (completed charts) Analyzed: outpatient records of patients with T1DM - 224 Survey of parents of children with T1DM The study materials were approved by the Ethics Committee of the Scientific Research Center.

Results. In total, 3389 children with T1DM live in the study regions, which exceeds 10% of the total number of children with T1DM in the Republic of Uzbekistan. The regions that took part in the study differ from each other in demographic, socio-economic and geographical situation. This may contribute to differences in the average incidence and prevalence of T1DM in children. In 2 of the 6 regions participating in the study, the incidence and prevalence of T1DM significantly exceeds similar indicators (13.2 and 72.4 per 100 thousand children aged 0 to 15 years, respectively). The system of care for children with T1DM in all regions is organized in accordance with the procedure for providing medical care to children with endocrine pathology. Outpatient care is provided in clinics, regional diabetic centers or dispensaries. Inpatient care is provided in endocrinology departments or on bedsprecrinological profile, part of pediatric departments based in regional or city hospitals. Children's endocrinology beds in the regions can be used for hospitalization of patients with any endocrine pathology, including diabetes. The provision of inpatient endocrinology beds for the child population in the regions ranged from 4.5 to 10.8 per 100 thousand.

Conclusions. Children with T1DM are provided with everything necessary to achieve good control of DM at the expense of public funds: the best insulin preparations and drug delivery systems, glucometers, test strips, necessary laboratory tests, outpatient and inpatient medical care. The problem of obtaining free test strips in sufficient quantities remains. Educational programs for self-management of the disease—diabetes schools—are available everywhere. However, the target level of glycated hemoglobin below 8% is achieved in less than half of children with T1DM. The best values of this indicator were determined in patients with regular medical supervision and accurately following the doctor's recommendations. One of the opportunities to improve medical monitoring of children is the introduction of modern technologies for continuous blood glucose monitoring, remote medical monitoring and patient consultation. It is necessary to evaluate the effectiveness of these techniques in practice. Based on the results of the study, it is planned to develop clinical protocols and recommendations for the introduction of effective technologies into practical healthcare.

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