

Social risk assessment in children with diabetes mellitus to plan medical and social care

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OBJECTIVES

According to the World Health Organization, the social determinants of health, the conditions in which people are born, grow, live and work, - significantly influences on their health (1).

Objective: Investigate social conditions of families with children with type 1 diabetes mellitus (diabetes) to plan social and medical care.

Research question: does the social conditions of families influence on diabetes control in children?

METHODS

The commonly accepted main social determinants of child health include, but are not limited to barriers for healthcare, late and irregular follow-up, parents unemployment and single relationship status, poverty and needs for social support. The study investigated prevalence of the social risk factors and their influence on diabetes control in children. This operational research was a part of the large study – the Clinical Audit in Pediatric Endocrinology.

The survey was conducted in 2014 in the six Russian regions – St-Petersburg, Samara, Ryazan, Tomsk, Tyumen, Bashkortostan Republic. In total, 221 mothers of children with diabetes were interviewed in health facilities (187 included in the analysis). Mean age of the children, whose mothers were interviewed, was 10 years (from 2 to 18), mean duration of diabetes – 4 years, 60 % were girls. Some data from the interviews was compared with data from medical charts of children with diabetes mellitus in the same regions (n=224).

Table 1. Regularity of HbA1C Test

Regularity	Medical charts (%)	Interviews (%)
Every 3 months and more	20,5	57,5
Every 6 months	37,1	25,8
Once a year and less	39,3	15,4
No data	3,1	1,3

Table 2. Medical-social factors influencing on HbA1C level

Factors	HbA1C	Pearson Chi-Square, p=0,025	Minimum expected count
Regular appointments with endocrinologist (1 per 3 months)	< 8%	7,683	5,02389
Regular daily blood glucose testing at home (≥4 times)	< 8%	20,466	11,14329
No need for improving housing condition	< 8%	11,838	5,02389
Several social risk factors	≥ 8%	5,510	2,82

RESULTS

All parents confirm that their children have full access to comprehensive medical care, insulin analogs and needed equipment. These services are provided by the Russian state government. More than 70% of children have regular appointments with endocrinologists (at least every 3 months). All diagnostic tests are available for free in health facilities, but from 15 to 39% patients don't have regular HbA1C test (Table 1). Half of children have level of HbA1C higher than 8%. Level of HbA1C was strongly related with adherence to recommendations for follow-up and self-monitoring (Table 2). Combination of poverty, single maternity and parent unemployment in 3% of families correlated with high HbA1C in patients. The most needed social assistance for families with children with diabetes are financial support (50%), better housing condition (39%), psychological counseling (39%), legal advice (35%).

CONCLUSIONS

The study confirmed necessity of screening social risk factors in families of children with diabetes mellitus. Open and effective communication between physicians and patient's family gives physicians an opportunity to understand and discuss the determinants influence on the disease control to plan comprehensive medical and social care. The strategy strengthening linkages between health and social services will be developed and implemented in Russia within the Alfa-Endo Program.

References

1. CSDH (2008). *Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health.* Geneva, World Health Organization.

Authors have nothing to disclose

