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Efficiency of Local Clinical Protocols Implementation Concerning Medical Care Delivered to Children with Nephrological Pathology in Ivano-Frankivsk Region

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Keywords:

diseases of the urinary system; the local protocol of medical care; children

Abstract.

Primary incidence of kidney and urinary tract diseases and disability as a result of these diseases are important indicators of the health status of the child population in Ukraine.

The objective of the research was to analyze the efficiency of the implementation of local clinical protocols concerning medical care delivery to children with nephrological pathology in Ivano-Frankivsk region.

Materials and methods. The material for the research involved reporting documentation about the state of the nephrological care for children's population of the Ivano-Frankivsk region in 2011-2015 and the data of The Center of Medical Statistics of Ministry of Health of Ukraine.

Results and discussion. The main indicators of pediatric nephrology service work during 2011-2015 in Ivano-Frankivsk region were analyzed. The introduction of local clinical protocols of medical care and clinical trials of patients with nephrological diseases in health care facilities of Ivano-Frankivsk region had a positive impact on decrease in prevalence and primary diseases incidence and primary disablement of the urinary system in children's population in Ivano-Frankivsk region for the last 5 years.

Conclusions. The introduction of local protocols and clinical trials of pediatric patients with nephrological pathology in health care facilities of Ivano-Frankivsk region made it possible to improve the quality of medical care maintaining the standards of specialized medical care provision at all its stages.



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Problem statement and analysis of the recent research

At the modern stage of development of the health care system of Ukraine, the quality of the medical care is considered to be one of the main evaluative criteria for its efficiency. Measurement of the medical care quality with the help of indicators is the general practice in the developed national health care systems. The indicators of medical care quality refer to the structure, process or result of medical care.

Standardization is considered to be one of the main components of the management system of the health care quality in the whole world. The following scheme of the medical care standardization is recommended: adaptation of the clinical guidelines (CG) – creation of the standard – development of the local clinical protocol.

Clinical guidelines (CG) are affirmative statements developed on the basis of national methodology as the help to make decisions concerning the provision of rational medical care in the different clinical situations. Put it otherwise, these are recommendatory documents, which are the informational support for a doctor and a patient about the best medical practice, the efficiency of which has been scientifically proved. They do not provide an answer to all the clinical questions and do not guarantee successful clinical treatment in every situation.

Medical standard (MS) is a normative document of the state level which defines norms and requirements for the organization and the quality criteria of medical care delivery as well as indicators which help to provide further audit on different levels of providing quality management system. It is created on the basis of already existing CG and is a laconic document, created based on the calculation of possibilities of each country's health care system. On the basis of standard assuming the calculation of possibilities and resources of regional public health authority the development of clinical protocols is predicted. Clinical protocols are technical normative acts defining requirements for medical care delivery to patients, in case of certain diseases and syndromes. Thus, CG and standards have the answer to the question: "What must be done?", and protocols – "How must be done?"

Terms and conditions of review should be indicated while creating medical standards. MS must be reviewed in case of changes in CG, but not less than every 5 years.

Clinical protocols are necessary for variations in clinical practice to occur only within allowable limits. Improvement of the treatment is a result.

According to the order of Ministry of Health Care of 28.09.2012 №751 "About creation and implementation of medical and technological documents for standardization of medical care in the system of the Ministry of Health of Ukraine", local clinical protocols of medical care for children with microbial-inflammatory kidney and urinary tracts diseases, glomerulonephritis and kidneys and urinary tracts defects were developed and implemented in the regional health care facilities.

The objective of the research was to analyze the efficiency of the implementation of local clinical protocols concerning medical care delivery to children with nephrological pathology in Ivano-Frankivsk region.

Materials and methods of the research

Such official statistical data as reporting documentation about the state of the nephrological care for children's population of the Ivano-Frankivsk region in 2011-2015 and the data of Centre of Medical Statistics of Ministry of Health Care in Ukraine about morbidity and prevalence of urinary organs system diseases among children and teenagers were analyzed. Research and information as well as statistics methods were used for data processing.

Results of the research and their discussion

The results of implementation of local clinical protocols of medical care for children with kidneys and urinary tracts pathology in the health care facilities in Ivano-Frankivsk region were analyzed denoting their positive influence. Indicators of genitourinary system diseases prevalence among children and teenagers of the region decreased from 56.01 to 54.4‰ for the first time in the last 5 years and primary morbidity constituted 29.6‰ versus 30.3 ‰.

Table 1

Indicators of general and primary morbidity of urinary organs system diseases among children population of Ivano-Frankivsk region

Regions	Genitourinary system diseases (per 1000 children)									
	General morbidity					Primary morbidity				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Ivano-Frankivsk region	56.1	54.8	56.0	54.6	54.4	30.7	29.5	30.3	29.3	29.6
Ukraine	55.8	54.2	53.1	47.8	47.3	25.7	28.8	28.3	25.4	25.5

The prevalence of genitourinary system diseases decreased from 22.5‰ in 2013 to 2.4‰ in 2015 among children population at the age of 0 to 14; primary morbidity decreased from 43.5‰ in 2013 to 40.9‰ in 2015 in this age category.

At the same time, the decrease in general and primary morbidity of acute glomerulonephritis was observed, namely from 0.1‰ in 2014 to 0.06‰ in 2015. The prevalence of chronic glomerulonephritis stabilized, namely from 0.25‰ to 0.24‰ (67 children), and the morbidity decreased and became 0.06‰ (16 children) in comparison with 0.07‰ per 1000 children. Children with hematuric form and isolated urinary syndrome dominated among children with chronic glomerulonephritis.

General and primary morbidity of children's population in the region with urinary system infections exceed national statistical data from year to year (prevalence 9.78; primary morbidity 2.87 per 1000 children in 2013). However, in 2015 the aforementioned indicators were managed to be decreased, namely from 14.4 to 14.1 and from 5.3 to 5.1 per 1000 children, respectively.

Table 2

Nosological structure of the general and the primary morbidity of the urinary system organs of children's population in Ivano-Frankivsk region

Nosological unit	Primary morbidity					General morbidity				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Acute glomerulonephritis	0.08	0.10	0.08	0.10	0.06	0.08	0.10	0.08	0.1	0.06
Chronic glomerulonephritis	0.02	0.02	0.02	0.07	0.06	0.23	0.23	0.21	0.25	0.24
Urinary tracts infection	5.5	5.4	5.3	5.1	5.1	15.0	14.3	14.4	14.3	14.1
including – chronic pyelonephritis	1.1	1.1	1.02	0.86	0.88	6.3	6.3	6.27	6.1	5.9
- cystitis	5.9	5.9	5.7	5.9	5.5	5.9	5.9	6.0	6.1	5.6
Including – acute cystitis	5.9	5.7	5.9	5.9	5.5	5.9	5.7	5.9	5.9	5.5

Important criterion for estimation of state of medical care delivery to children with nephrological pathology denotes the quality of child's life and the social public status is a number of disabled children. Unfortunately, the indicator of disablement of children with urinary organs morbidity in Ivano-Frankivsk region has increased for last years and became 4.5 in 2015 (3.5 in Ukraine) per 10000 children. The indicator of the primary disablement decreased from 1.1 to 0.8 (in Ukraine – 0.5) per 10000 children in 2015. 22 children for the first time were recognized as disabled from childhood with kidneys and urinary tracts pathology. They constituted 3.3% among all disabled children recognized disabled from childhood for the first time in the region.

Nephrological Department of Regional Children Clinical Hospital works in accordance with requirements of normative documents of the Ministry of Health Care of Ukraine. About 800 children in the region receive qualified nephrological care annually. Completeness of hospital bed usage is satisfactory (in 2014 – 101.5%; in 2015 – 104.6%). The work of the nephrological bed of the regional children hospital in 2015 constituted 355.3 days, while nephrological beds around Ukraine worked with underuse and constituted 323.0 days.

Conclusions

1. Morbidity of urinary system is one of the important indicators of health condition of the children population having essential most efficient and social load.
2. Implementation of the local protocols and clinical trials of patients with nephrological pathology in health care facilities of Ivano-Frankivsk region had positive influence on indicators' decrease of general and primary morbidity of urinary system in children of this region, providing the quality of the medical care delivery in accordance with requirements of national standards and unified clinical protocols of medical care.

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