American Journal of Medicine and Medical Sciences 2022, 12(9): 1002-1005
DOI: 10.5923/j.ajmms.20221209.32

Analysis of Commission Forensic Examinations Related to the Provision of Medical Care to Children

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Abstract In 2012–2021, the materials of a commission of forensic expertise related to the provision of medical assistance to children were examined in three regions. Two–thirds of cases with defects in health care were related to infants. Pediatricians, general practitioners, neonatologists and paramedical staff in outpatient institutions are more likely to be deficient. More than half of the defects had a diagnostic hue, more often in the form of rejection of the underlying pathology. A significant part of the defects were due to subjective reasons, mainly due to neglect of the patient. Many defects have seriously affected the outcome, creating a tendency for Death to surface, or directly leading to death.

Keywords Commissioned forensic medical expertise, Children's medical care, Ambulatory institutions, Medical care defects, Rural medical centers

1. Introduction

Relevance of the topic. Ensuring that children receive quality health care and improving the health of the younger generation is one of the main tasks of the health system. The issue of timely, full, high–quality medical care for children is devoted to a number of studies of specialists from different regions. (D.O.Ivanov et al., 2017; S.S.A.Iskandar, I.S.Isaev, 2018; T.M.Mekari et al., 2017).

The simplest and most effective way to improve the quality of medical care is to identify medical care defects (MCD) and develop targeted measures to eliminate them based on a comprehensive analysis. (A.A. Baranov et al., 2015; V.J. Gawron et al., 2016). In this regard, the commission's forensic-medical examinations (CFME) conducted in connection with professional offenses of medical personnel (POMP) have a special place. The main goal of this special practice is to help in the legal evaluation of the provided medical care, and the actions of medical personnel are thoroughly studied by the commission of experts. (A.V. Kovalev, A.A. Martemyanova, 2015). At this point, it should be noted that the materials of the CFME held in Uzbekistan on the subject of POMP have not been sufficiently studied by experts (2) (Z.A. Giyasov and others, 2019).

Received: Sep. 3, 2022; Accepted: Sep. 23, 2022; Published: Sep. 29, 2022
Published online at http://journal.sapub.org/ajmms

The aim of the study is an expert assessment of defects in the provision of medical assistance to children on the basis of CFME materials.

2. Materials and Research Methods

In 2012–2021, the subject of study was materials CFME, conducted in the Andijan, Namangan and Fergana regions in connection with the provision of medical assistance to children. During the years of the study, 364 surveys conducted in three regions revealed deficiencies in the provision of medical care to children, and the records of these surveys were thoroughly analysed. The expert commission, in accordance with the requirements of existing manuals and rules, includes clinicians–specialists in the field. Recommendations for modification of the classification, which took into account the specifics of medical care for children, were examined. In this connection, attention was paid to such aspects as the profession of the medical practitioner who allowed the defect and, in addition to the medical institution, the nature of the defects, the causes of the occurrence and the degree of influence on the final result. The records of the previous service inspections on the current situation in the case file were also analyzed. The collected database was marked with numerical codes on the basis of a special program and was statistically processed accordingly.

3. Results of the Study and Their Discussion

A total of 419 MCD were identified in the 364 CFME mentioned above (in some cases there were 2 or more defects). In the period of the study, it was noted that over the past five years these cases have decreased significantly, both in absolute and relative terms.

According to the analysis, more boys (38.7 per cent and 61.3 per cent respectively) were treated with disabilities than girls. When CFME materials were examined for age groups of children, two thirds of these cases were related to the care of infants, 17.3 per cent of which were neonatal. Children of school age accounted for 14.3 per cent (photo 1).

According to the results of the survey in the field of medical personnel, the MCD in the provision of medical care to children was observed in the activities of more pediatricians, neonatologists and nurses, whose contribution corresponded to 78,2% of the total number of defects. The defects associated with the activities of medical personnel of other specialties were much less (21.8%) (photo 2).

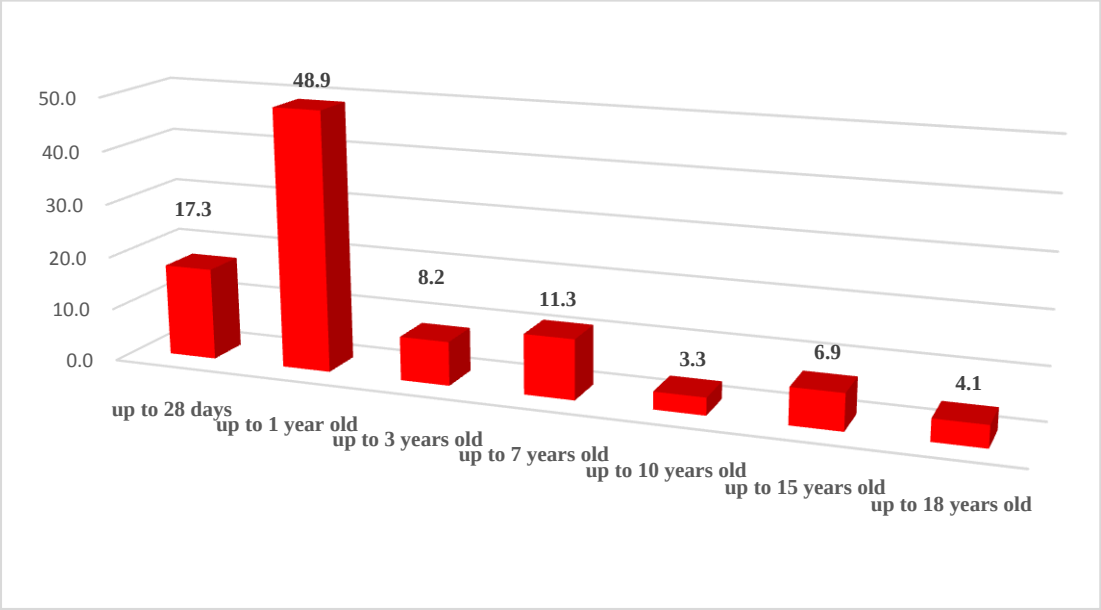

Photo 1. Age distribution of observations

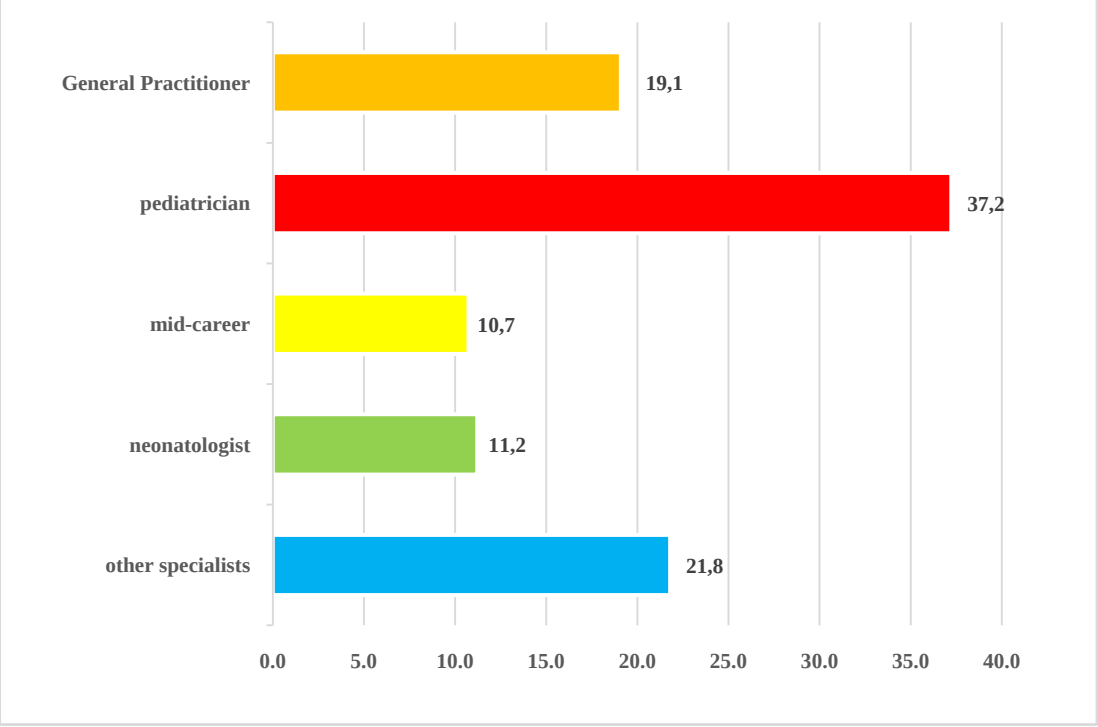

Photo 2. Medical personnel in the specialties section

More than half of all MCD cases (51.7%) were admitted to outpatient facilities, mainly by rural physicians (47.7%). 45.2% of the defects were observed in the activities of the employees of the institutions, among which more defects were found in the district central hospitals (34.6%) and city hospitals (4.8%). In 13 cases (3.1 per cent), deficiencies occurred in non–state health facilities, children's homes and other places. Over the years, there has been almost no change in the incidence of MCDs in outpatient and inpatient facilities, which means that most of the defects were correctly attributed to the contribution of outpatients (table 1).

Table 1. Places where medical care defects are allowed

№	Institutions	Abs	%
1.	Rural medical centers	200	**47,7**
2.	District, city polyclinics	10	**2,4**
3.	Emergency medical assistance	7	**1,7**
4.	District Central Hospital	145	**34,6**
5.	City hospitals	20	**4,8**
6.	Regional multidisciplinary medical centers, dispensaries	10	**2,4**
7.	Clinical hospitals	2	**0,5**
8.	Structures of the Scientific Center for Emergency Medical Care of the Republic	12	**2,9**
9.	Institutions of the non–state system	4	**1,0**
10.	Others	9	**2.1**
Total:		**419**	**100,0**

When evaluating medical care, the expert commission determines, first of all, the conduct of medical personnel, the actual attitude to the performed procedures, the standards of diagnosis, the conformity of clinical reports. For this reason, one or more specialists in the specialty in question are involved in the commission. In cases where defects are identified, their essence is revealed. According to the classification, there are essentially four groups–diagnostic, curative, preventive and other defects.

Of the deficiencies in the CFME materials, 51.2% were diagnostic defects, and a significant proportion of these were due to non–detection of the underlying disease and late diagnosis. 43.7% of MCDs was related to the process of treatment, mainly in the form of deficiencies in the appointment and conduct of medical procedures, as well as the late hospitalization of patients. Preventative and other types of defects were relatively rare (0.7 per cent and 4.4 per cent respectively) (Table 2). Over the years, there have been no significant differences in the ratio of the four groups of defects over time. At this stage, it should be noted that, unlike other groups, diagnostic deficiencies can in most cases lead to secondary defects. In particular, improper external introduction also affects the appointment and conduct of self–healing procedures.

Table 2. Information on the nature of health–care defects

№	The essence of MCD	abc	%
1	The underlying disease (injury) is not identified	177	**42,2**
2	The main disease (injury) complication was not identified	1	**0,2**
3	No significant comorbidity was identified	1	**0,2**
4	Diagnosed late	35	**8,4**
5	Other diagnostic defects	1	**0,2**
6	Late hospitalization	38	**9,1**
7	Defects in surgical treatment	13	**3,1**
8	Shortcomings in the appointment and conduct of medical procedures	108	**25,8**
9	Irrational conduct of childbirth	14	**3,3**
10	Misuse of medicines	7	**1,7**
11	Other defects in treatment	3	**0,7**
12	Deficiencies in immunoprophylaxis	3	**0,7**
13	Deficiencies in dispensary surveillance	2	**0,5**
14	Deficiencies in medical record keeping	16	**3,8**
Total:		419	**100,0**

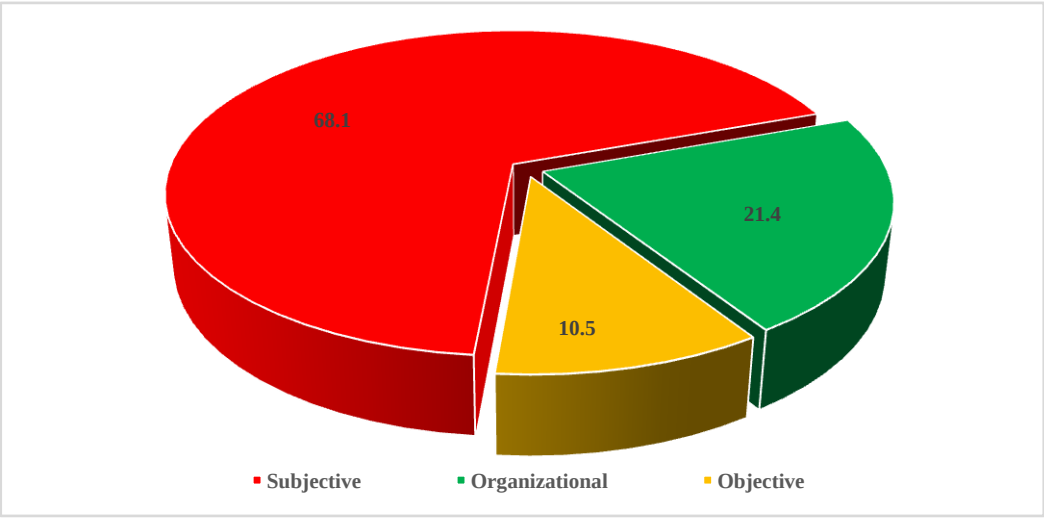

Photo 3. Groups of causes of defects

The main objective of POMP on CFME is to assist in the legal evaluation of medical care provided to citizens by law enforcement agencies. It was therefore important to identify the causes of violations. According to the analysis, more than two thirds of the defects (68.1 per cent) were caused by health–care workers, mainly due to neglect of the patient (51.6 per cent) and 16.5 per cent due to insufficient qualifications of the medical officer. Organizational and objective reasons are relatively rare (Photo 3). Shortcomings in the organization of the treatment and diagnostic process for organizational reasons (19.1 per cent) as well as for objective reasons – delay in seeking medical assistance (7.6 per cent) constituted the majority. The share of the above–mentioned groups in the cause structure of MCD has not changed significantly over the years.

In cases where there is a shortage of medical care, the expert commission should clarify the extent to which these defects affect the final result. After all, this question is also relevant in the legal evaluation of the activities of medical personnel. According to the results, 68.3% of MCDs had a significant impact on the end result, creating a predisposition to death. These defects were indirectly related to death. In 15 cases (3.6%), the cause of direct death was MCD. In some cases, the defects resulted in longer treatment (15.3 per cent) and disability (2.9 per cent). However, some defects (10.0%) did not affect the final result at all.

4. Conclusions

Based on a comprehensive analysis of CFME materials related to the provision of medical care to children, the following conclusions can be drawn:

1. Two thirds of cases in which defects are detected in the CFMEs are related to the care of infants, a quarter of which are neonatal.
2. Defects were mainly attributed to paediatricians, general practitioners, neonatologists and nurses, more often in outpatient institutions.
3. More than half of the MCD was associated with the diagnostic process, most of which were organized due to the absence of the underlying disease.
4. 68.1% of the defects were due to subjective reasons, mainly due to neglect of patients by medical personnel. Based on 21.4% of the MCD, there were organizational reasons.
5. Of the deficiencies in medical care, 71.9 per cent had a serious impact on the end result, most of which were predisposed to death.
6. In improving the quality of health care, children should take into account the analysis of survey materials.

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