



ISSUES OF IMPROVING THE METHODOLOGY FOR ASSESSING THE QUALITY OF MEDICAL CARE PROVIDED TO CHILDREN IN COMMISSION FORENSIC MEDICAL EXAMINATIONS

M.M.Naumanov

Assistant, Department of Pathological Anatomy and Forensic Medicine,
Andijan State Medical Institute

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Abstract

Detection and evaluation of defects in medical care provided to children (DMC) are carried out through commission forensic medical examinations (CFME). However, the existing methodology often remains ineffective due to predominantly subjective assessment and insufficient evidence. This article analyzes more than 500 CFME reports conducted in Andijan, Namangan, and Fergana regions of Uzbekistan from 2012 to 2021. It was found that 83.6 % of DMC were related to subjective causes (e.g., insufficient qualification of specialists). Based on international experience (multidisciplinary teams – MDT – in the USA and European countries, and WHO standards), proposals have been developed to improve the methodology: introduction of standardized assessment forms, enhancement of specialists' qualifications, and creation of a digital evidence database. The results will contribute to improving the quality of medical care and shortening judicial proceedings.

Keywords: commission forensic medical examination (CFME), paediatric medical care, defects in medical care (DMC), methodology improvement, subjective causes, multidisciplinary team (MDT) approach.

Introduction

Child health protection is one of the priority directions of state policy. In accordance with the Development Strategy of New Uzbekistan for 2022–2026, measures aimed at preventing child mortality and disability are being strengthened. However, defects in medical care (DMC) remain a serious problem: 71.7 % of them have a significant impact on the final outcome (creating predisposition to death). CFME is the main mechanism for forensic medical evaluation of such defects, but the current methodology often fails to combine clinical and legal requirements effectively. Although diagnostic defects constitute 50.1 %, objective indicators (e.g., evidence-based medicine standards) are insufficiently used in the assessment.

In international practice (for example, the multidisciplinary team (MDT) approach in the USA and WHO guidelines on assessing the quality of paediatric care), special attention is paid to improving the methodology. In Uzbekistan, and especially in the Central Asian region (examples of Kazakhstan and Tajikistan), forensic medical services are developing, but lack of specialist qualifications and resources in paediatric cases remains a problem. The purpose of this article is to develop scientifically grounded recommendations for improving the CFME methodology based on empirical data from three regions of Uzbekistan and international standards.

Materials and Methods



The study is based on a retrospective analysis of 512 CFME reports related to medical care provided to children (aged 0–17 years) conducted in Andijan, Namangan, and Fergana regions from 2012 to 2021 (including 65.4 % fatal outcomes in the neonatal period). Materials were obtained from the archives of the Republican Forensic Medical Examination Centre and regional departments.

Methods used: anamnestic (analysis of medical documentation), clinical (assessment of defect types and consequences), statistical (frequency and regression analysis using SPSS 25.0), and comparative (comparison with international standards). DMC were classified by causes: subjective (lack of qualification – 83.6 %), organizational (lack of resources – 6.2 %), and objective (severity of the disease – 10.2 %). Ethical standards (confidentiality and consent) were observed during the analysis.

Results

According to the analysis, 50.1 % of DMC were related to diagnostics (e.g., delayed diagnosis of acute respiratory viral infections), 44 % to treatment (incorrect dosing of medicines), and 0.7 % to prevention. In outpatient facilities, diagnostic defects reached 69.3 %, while in inpatient settings treatment defects amounted to 61.4 %. By age groups: in newborns (0–28 days) treatment defects prevailed (49.5 %), and in infants aged 29 days to 1 year diagnostic defects were predominant (74.2 %).

By specialty: DMC committed by paediatricians and general practitioners had a significant impact on the outcome in 78.4–89.4 % of cases, while in neonatologists this figure was 47.1 % (predisposition to death). Structure of causes: subjective factors (inattention, low qualification) – 83.6 %, organizational – 6.2 %. Consequences: 71.7 % created predisposition to death, 15.4 % prolonged treatment duration, 2.9 % led to disability.

In international comparison, the Uzbek CFME system is less standardized than forensic medical evaluation in the USA: there, agreement rates reach 80 % through video recording and MDT, whereas in Uzbekistan subjective assessment dominates (86.9 %).

Discussion

The study results revealed the weaknesses of the existing methodology: the predominance of subjective causes (83.6 %) stems from insufficient training and qualification, which is a common problem in Central Asia (for example, in Kazakhstan, up to 40 % of forensic conclusions are considered questionable due to low specialist competence). In international practice (WHO and RCPCH standards), improvement is achieved through multidisciplinary teams, which reduce diagnostic and treatment defects by 30–50 %.

In Uzbekistan, problems include incomplete medical documentation (insufficient evidence in 31 % of cases) and limited resources, which prolong legal proceedings. Proposals:

1. Introduction of standardized assessment forms (based on evidence-based medicine);
2. Annual training for experts in MDT format;
3. Creation of a digital platform (database of documents and statistics);
4. Age-specific assessment protocols (separate for neonatal and postnatal periods).

These measures can reduce DMC by 20–25 %, but their implementation requires budgetary and legislative changes.

Conclusion

Improving the CFME methodology is key to enhancing the quality of medical care for children and ensuring forensic medical justice. The study results highlight the need to eliminate subjective causes and introduce international standards. If the proposed recommendations are tested as pilot projects in the healthcare system of Uzbekistan, child mortality and disability can be reduced by 15–20 %. In the future, regional cooperation (with Central Asian countries) and continuous monitoring are necessary.

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