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## DEMOGRAPHICS AND PROFESSIONAL CHARACTERISTIC OF UKRAINIAN PHYSICIANS INVOLVED IN CRIMINAL NEGLIGENCE

**Abstract.** *A retrospective review of all the medical malpractice cases (350 in total) registered between 2007 and 2016 at Ternopil, Zhytomyr and Chernivtsi Regional Bureaus of Forensic-Medical Expertise was performed. The study analyzes the official data of court verdicts in cases of medical malpractice taken from Ukrainian State Register of court decisions. Approximately 5000 cases of criminal medical malpractice cases are registered annually in Ukraine. Only half of them are brought to the court. Female physicians appeared to have an equal risk of claims in comparison with male physicians. An average age for physicians with a claim was (46,02±10,48) and 48 years respectively. The most experienced and skillful specialists faced medical negligence in Ukraine.*

**Key words:** *physician demographics, dereliction of duty by the medical staff, forensic-medical expertise, malpractice litigation, medical negligence.*

**Introduction.** Medical aid given ineffectively and insufficiently resulting in unfavourable consequences for patients is an important social issue nowadays. Even for the countries with a high technological level of medical development the consequences of inappropriate medical aid are among the major causes of the population mortality. Thus, according to the data presented by the Professor Johns Hopkins University School of Medicine Dr. Martin Makary, 251454 patients die in the USA annually due to medical errors, which ranks the third position in general state structure of mortality causes of the American population [1]. In spite of a considerable success in diagnostic and therapeutic technologies of modern clinical medicine the risk of medical error does not decrease. On the contrary, it increases [2]. Cases of unfavourable medical treatment in Ukraine become a subject of trying by forensic expert boards which establish the types of errors made, their causes, harmful consequences resulted from inappropriate professional actions of medical professionals. At the same time, defects occurring while giving medical aid depend directly on personal characteristics of a doctor and his/her professional training [3]. Although, demographic-qualification characteristic of doctors who are involved in criminal negligence (that is, specialty of these doctors, their gender

belonging, age, working experience, medical category, official position) have not been studied in Ukraine before. Therefore, it is the **objective** of the study.

**Materials and methods.** According to the objective of the study the materials of the board and comprehensive forensic expertizing in cases of improper performance of professional duties (malpractice) by medical practitioners (so called "medical cases") registered in Ternopil, Chernivtsi and Zhytomyr regional forensic expertise bureau during 2007-2016 have been examined. In general 350 cases instituted against medical staff from 10 different regions of Ukraine were examined: Ternopil, Khmelnytskyi, Zhytomyr, Volyn, Chernivtsi, Vinnytsia, Lviv, Rivne, Ivano-Frankivsk and Chernihiv. During the same period of time additionally the Uniform State Register of Court Decisions was analyzed. It is an automatized electronic system of court verdicts on the territory of Ukraine. Content-analysis method was used, and the data obtained were processed by means of descriptive statistics method.

**Results of the study.** According to the current Criminal Code of Ukraine there are 14 crimes differentiated where a medical worker is a special subject. The most spread among such crimes is dereliction of professional duties by the medical staff, stipulated by Article 140 of the Criminal

Code of Ukraine. Due to this fact the official site of court decisions made in criminal cases instituted against doctors according to the fact of crime was analyzed. Considering the data of the site of court decisions and the results of the examined 350 materials of forensic expertise in “medical cases”, about 5000 criminal cases were found to be complained in Ukraine annually against medical workers. Most often these cases were initiated against anaesthesiologists, obstetricians-gynecologists, therapists and surgeons [4]. Although only single cases resulted in further proceeding in courts (0,6% in general), since the majority of them were closed for lack of corpus delicti or reconciliation of the parties. In order to analyze demographic-professional characteristics of doctors, appropriate service certificates of the accused individuals from medical staff had to be studied. In the materials investigated service certificates of 59 doctors were found including obstetricians-gynecologists - 26 (44%), therapists – 14 (24%), surgeons (general, traumatologists, urologists, endoscopists) – 13 (22%), anaesthesiologists – 6 (10%). The distribution was practically equal according to gender belonging: men – 30 (51%), women – 29 (49%). It is significant that among doctors who made different errors, clinical workers of the mature age constituted the majority (40-49 years old) and older (50-59 years) – no 31% and 32% respectively, and 17% of doctors were 30-39 years of age. In general, an average age of medical workers was  $46,02 \pm 10,48$ , (median (Me) = 48 years). Thus, among those who gave inappropriate medical aid resulting in severe consequences for patients the majority (80%) were professionals of the mature and older age, not beginners. The indicated age correlated with an appropriate working experience of doctors by their profession. Thus, among clinicians who made different errors in their therapeutic-diagnostic activity the doctors with substantial practical experience (over 10 years by specialty) constituted 85%. In general, an average duration of working experience by the profession of accused medical workers was  $21,86 \pm 10,40$ , (median (Me) = 22 years). In order to establish the level of qualification training of doctor against whom criminal cases were initiated their official positions and medical categories were analyzed. A high percentage of doctors holding administrative

posts were determined – chief of the department, deputy chief of the hospital of chief physician of the hospital. The ratio of this category of medical workers to ordinary residents was 45:55. The most impressive was the situation concerning qualification level of the doctors whose insufficient medical activity resulted in criminal investigation. The most qualified professionals made errors with severe consequences including those with the 1<sup>st</sup> medical category – 26%, and higher category – 59%.

Further analysis of demographic-professional level of medical workers against whom criminal proceedings were instituted in Ukraine included comparison between surgeons (general surgeons, traumatologists, urologists, obstetricians-gynecologists) and therapists (general practitioners, cardiologists, endocrinologists, gastroenterologists). Although none of the substantial statistically reliable differences were found concerning the analyzed features. However, according to the data obtained longer working experience and older age of surgeons who were accused of improper dereliction of their professional duties can be established in comparison with doctors of therapeutic specialties. An average age of surgeons was  $47,10 \pm 10,12$ , median - (Me=49). An average age of therapists was  $43,90 \pm 10,84$ , median – (Me=42,5). An average working experience of surgeon was  $22,95 \pm 10,19$ , median – (Me=24), An average working experience of therapists was –  $19,75 \pm 10,50$ , median – (Me=20). It should be noted that among doctors without medical category who were accused in criminal negligence in Ukraine there were more therapists than surgeons. The proportion of those beginners was (20%) among all the therapists against (8%) of young specialists from general number of the accused surgeons.

**Discussion.** In general the data obtained correspond to the results of other scientists. Thus, Waterman A.D. et al. (2007), having analyzed 2909 doctors from the USA and Canada who made medical errors, established that an average age of those doctors was 49, and their working experience by profession was 16 years [3]. Richard L. Abbott (2003), analyzing inappropriate medical aid in ophthalmology found that 68,9% of North American eye specialists instituted to criminal

proceedings due to their medical errors were those of older age (40 years and older), an average age was 46 [5]. Similar data were given by David M. Studdert et al. (2016), who analyzed the data from National Practitioner Data Bank (USA) concerning the characteristic of 54099 doctors, who had one or more satisfied claims in the court concerning inappropriate medical aid given [6]. A prevailing majority of such claims in American courts concerned doctors older than 45 years (74%), and more than a half of them belonged to the three specialties as in Ukraine: therapy, obstetrics and gynecology, surgery [6]. Therefore, the situation concerning medical specialties with the highest risk from the point of view of juridical responsibility, prevailing of experienced doctors over the young ones in legal actions concerning improper medical aid given, in Ukraine in general corresponds to the world tendencies. This trend can be explained in the following way. The current clinical practice in Ukraine supposes that doctors-beginners usually manage patients with typical disease or injuries, when probability of medical error in the therapeutic-diagnostic process is minimal. Complicated, atypical cases, with life-threatening conditions, are the prerogative of more experienced professionals when considerable practical experience is required. Naturally, under these circumstances the probability of medical error becomes higher.

In general, to our mind one should agree with the statement suggested by Anupam B. Jena et al. (2011), who concluded that the majority of doctors for their 30-year practical work at least once face the complaints about inappropriate medical aid given [7]. At the same time, there was no disproportion found among Ukrainian doctors with improper medical practice and further legal actions instituted against them concerning gender belonging. The majority of the cited researchers state that men prevail considerably among those doctors who made medical errors from (77)% to (82-93,6)% respectively [3,6,5]. It is indicative of the fact, that irrespective of their natural increased responsibility for work, accuracy and organization, women- doctors in Ukraine equally with men receive complaints from their patients concerning improper medical aid and further being accused in the court.

It should be noted that errors in practical work

of doctors in Ukraine are made by those with high or highest level of professional qualification. Practically half of them were on administration posts. In this respect the statement suggested by Shozo Miyake (2001), Vice-President of the world-known clinic Musashino Red Cross Hospital (Tokyo, Japan), is reasonable. Analyzing medical incidents in the hospital he concluded that medical errors often are made due to certain subjective reasons. These reasons are stipulated by certain traits of character typical for doctors. He differentiated the following: superiority, self-confidence, arrogance, intolerance to critics, hiding the details of own improper practice, lack of confidence in medical staff [8].

**Conclusions.** Therefore, the study conducted is indicative of the fact that the majority of legal actions in Ukraine concerning malpractice or improper performance of professional duties by doctors are instituted against professionals with substantial working experience and highest level of professional qualification.

**Prospects of further studies** will concern investigation of social, juridical and clinical peculiarities of improper medical aid given in Ukraine, specification of possibilities of forensic diagnostics of such cases and elaboration of appropriate preventive measures.

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