

## Health Professionals' Attitudes Toward Futile Medical Care in Lithuania

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**Key Words:** *futile medical care; intensive care; end of life; decision-making; medical ethics; physicians' attitudes.*

**Summary.** *Background and objectives.* The topic of futile medical care is being discussed widely in different contexts throughout the world. Many countries have adopted various strategies in dealing with this phenomenon. In Lithuania medical futility remains an ignored topic with little-to-no research in this field. Futile care is devastating because it puts medical professionals to a situation, where they must provide treatment and care, invest expensive materials and knowledge, even though it is obvious that patient will not survive. We aimed to disclose the physicians' and medical residents' attitudes to futile medical care in some major Lithuanian health care units.

*Methods.* The cross-sectional study was conducted to survey a number of different aspects of futile medical care among 548 physicians from intensive care, surgery, and internal medicine units in Lithuania.

*Results.* Physicians' attitudes toward care provided in medically futile situations were rather negative, with significant differences between specialty fields: intensivists' ratings were most negative and internal medicine specialists' ratings, most positive. Longer work experience correlated with more negative evaluations of futile medical care cases. Physicians who faced the death of patients more often perceived futile care more negatively. More than half of the respondents supported the strategy of withholding care in end-of-life situations, but only intensivists statistically significantly more often favored this strategy.

*Conclusions.* Overall, Lithuanian health professionals' attitudes toward medical futility is negative; nevertheless, it is largely affected by specialty field and work experience.

### Introduction

The concept of futile medical care (FMC) is being increasingly discussed in different contexts of scientific research during the last decades (1–3). FMC as a phenomenon became present after medical progress granted us a possibility to take over physiological functions of the human body (e.g. breathing – by mechanical ventilation, etc.). A universally accepted definition of FMC has not been established yet; however, clinicians in the field of critical care have similar and well-formed opinions considering this matter (1). Most of the currently available working definitions of FMC include irreversible dependence on life-supporting treatment (LST), extensive brain injury, pain and suffering, and use of considerable amount of limited resources

(e.g., wide-spectrum antibacterial therapy, mechanical ventilation, vasopressors) without reasonable hope of improvement (2).

Importantly, FMC implies not merely medical, but also a number of socioeconomic, ethical, and value-based issues. The ethical controversies of FMC have been addressed in the World Medical Association (WMA), for instance what health professional should do in cases when medical care cannot provide any reasonable benefit (4) or debating on the moral and professional obligation of health professionals to provide treatment at any cost (3). Respectively, ethical debate over the opportunity cost of FMC in some cases is compared to the priority setting issues with the limited resources in organ donorship (1, 5).

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Physicians' and nurses' concerns regarding the adequacy of end-of-life (EOL) decisions have been widely reported in the scientific literature (6, 7). The increasing demands for intensive care unit (ICU) beds, growing costs of critical care, and jeopardized integrity of the physicians who are (5) obliged to provide FMC are those frequently indicated reasons for the dispute over futile life-supporting therapy in clinical practice (7–9).

The first health policies regarding FMC issue were created in the late 90s in the USA, the UK, and some other Western European countries (9). Legal and ethical provisions regarding FMC are still little revealed, and EOF decision-making remains controversial in Lithuania. Moreover, the Lithuanian term for FMC was only coined in 2002, and policy is far from elaborating practical recommendations for health professionals (10). Long-term care facilities are hardly accessible for those in need in Lithuanian health care units because of fear of possible prosecution, lack of legal base or appropriate institutions; therefore, FMC often substitutes palliative care in Lithuania. Discussing medical futility (as well as other decision-making issues in the end of life) is considered as a taboo in the community of health care professionals. It is basically because of the lack of research and ignorance of evidence-based practices in Lithuania in general.

We aimed to reveal physicians' and medical residents' attitudes toward FMC in some major in Lithuanian health care units. The main aim was to obtain relevant information on how FMC is perceived by those who face it and how attitudes differ depending on how often FMC is faced. We hypothesized that intensivists perceived FMC more negatively than other physicians, due to higher rates of medical futility in ICUs.

## Methods

**Population and Setting.** This cross-sectional study was conducted in 26 of the 56 Lithuanian hospitals that provided intensive care services in January and February 2014. The sample of the study included all physicians (including junior physicians) working in the intensive care, surgery, and internal medicine units of the selected hospitals. A semi-structured questionnaire of the study was originally designed and randomly distributed to all respondents invited to participate in the study at their working place.

**Instrument Development.** The design and questions of the questionnaire were based on the previous studies (1, 2, 6). The questionnaire was tested in a pilot poll-study (the opinion poll included 30 physicians and junior physicians from a regional hospital in Lithuania) and accordingly was developed and improved afterward. Some linguistic corrections

were made after the pilot study. The final questionnaire solicited personal and professional information and required physicians' opinions on and attitudes about the following: assessment of two futile clinical cases that commonly occur in ICUs. The cases (vignettes) for respondents' assessment were created based on actual clinical cases provided by physicians with long-term experience of working in ICUs. The authors of this article developed the vignettes. The vignettes were tested and validated during the pilot study. We decided to use two vignettes, one including more common and less advanced treatment case scenario (mesenteric ischemia and death with resuscitation), and the other one – with a case scenario, including more advanced treatment option (which included a patient with vast myocardial infarction and an aortic-balloon contrapulsation device). Words “futility” and “futile” were not noted in the description of clinical scenarios. However, aggressive procedures (usage of vasopressors, mechanical ventilation, massive fluid therapy, other) and resuscitation were clearly indicated.

The questions on the attitudes were evaluated by the Likert-like scale, from “absolutely disagree” to “absolutely agree,” for instance, assessing the treatment tactic, etc. The first case described the futile care of a patient with mesenteric ischemia; the second was vast complicated myocardial infarction. The questionnaire also included questions about how often FMC was encountered in daily practice, number of direct face the death of patients; treatment tactic when dealing with EOL decisions: futile care withdrawal or withholding and other various other aspects of medical futility.

**Statistical Analysis.** Statistical analysis included the Mann-Whitney *U* test to compare nonnormally distributed linear variables. The Spearman correlation was used to determine correlations between nonnormally distributed linear variables. The Pearson chi-square test was used to detect associations between group variables.

**Ethics.** The approval from the Center of Bioethics of Lithuanian University of Health Sciences was obtained before the study. All participants were informed about the purpose of the study, and anonymity along with voluntary participation was guaranteed. Before visiting the hospital, permission to conduct the study was received from the hospital administration.

## Results

**Study Population.** We received 548 correctly filled questionnaires (response rate, 55%). A total of 25 physicians did not state their precise specialty, leaving the data from 523 surveys for analysis. The demographic and professional characteristics of the study population are presented in Table 1.

Table 1. Characteristics of the Study Population (n=523)

Characteristic	Value
Age, years, mean (SD)	44.8 (12.8)
Male sex, n (%)	214 (40.9)
Specialty, n (%)	
Intensivist	218 (41.7)
Surgeon	106 (20.3)
Internist	199 (38.0)
Work experience (general), years, mean (SD)	18.7 (13.1)
Work experience (intensivists only), years, mean (SD)	14.8 (9.9)
Current work place, n (%)	
University hospital	237 (45.3)
Regional hospital	194 (37.1)
General hospital	92 (17.6)
Religion, n (%)	
Christianity	436 (83.3)
Other	40 (7.7)
Atheist	47 (9)
Holding a PhD degree, n (%)	52 (9.9)

*Attitudes Toward Futile Medical Care.* Mean evaluations of futile care cases by different specialties are presented in Fig. 1. All mean evaluations of futile care were in the negative range. However, statistically significant differences between ratings of each specialty were identified ( $P<0.05$ ), with intensivists rating the cases most negatively. Although both scenarios were equally futile, a statistically nonsignificant trend in higher ratings of MI case was observed.

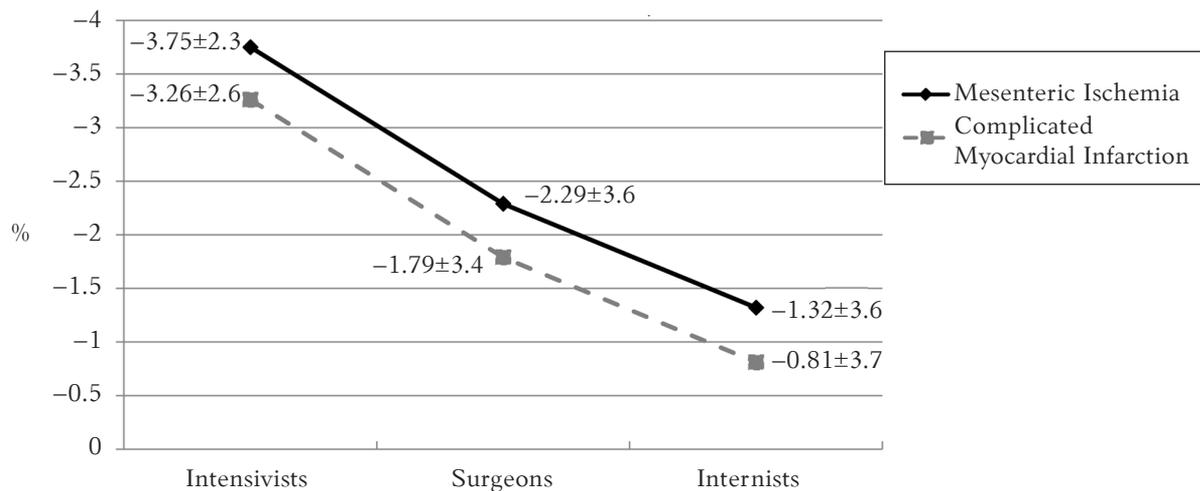


Fig. 1. Mean evaluations of futile care cases by different specialties

Work experience in general and work experience in ICUs statistically significantly negatively correlated with FMC case evaluations (Spearman coefficients  $-0.086$ ,  $P<0.05$ , and  $-0.306$ ,  $P<0.001$ , respectively), showing that each year of clinical practice altered the perception of FMC.

Significant differences of FMC case ratings between subgroups of gender, religion, or academic degree were not identified.

*Frequencies of Futile Medical Care in Medical Practice.* Data responding to the questions “How frequently do you face futile care?” and “How frequently do you directly face the death of patients?” are presented in Tables 2 and 3. The respondents from different specialties equally frequently face FMC ( $\chi^2=6.5$ ;  $P>0.05$ ). Less than 2% of the physicians stated they never encountered FMC, while 35% indicated they often faced this phenomenon. Intensive care physicians most frequently directly faced the death of patients ( $\chi^2=92.0$ ;  $P<0.001$ ). Despite the specialty, physicians who stated they faced the death of patients 5 or more times per month rated FMC cases statistically significantly more negatively ( $-3.2\pm 2.4$  vs.  $-2.0\pm 3.2$ ,  $P<0.001$ ).

Data depicting answers to question “Which strategy is more acceptable when dealing with EOL decisions?” are presented in Figure 2. In each specialty field, more than half of the physicians stated that withholding care in EOL situations was more acceptable, but only intensivists statistically significantly more often favored this strategy ( $\chi^2=22.0$ ,  $P<0.001$ ).

In our study, we did not identify statistically significant differences in outcome variables between subgroups of gender, religion, and academic degree.

Table 2. Data Distribution from Question “How Frequently do You Face Futile Care?”

Answer	Intensive Care	Surgery	Internal Medicine	Total
Never	2 (0.9)	3 (2.8)	5 (2.5)	10 (1.9)
Sometimes	129 (59.4)	74 (69.8)	128 (64.3)	331 (63.4)
Often	86 (39.6)	29 (27.4)	66 (33.2)	181 (34.7)

Values are number (percentage).

Table 3. Data Distribution from Question “How Frequently do You Directly Face the Death of Patients?”

Answer	Intensive Care	Surgery	Internal Medicine	Total
Once or less per month	38 (17.7)	61 (57.5)	104 (52.3)	203 (39.0)
2–4 times per month	99 (46.0)	35 (33.0)	77 (38.7)	211 (40.6)
5 or more times per month	78 (36.3)	10 (9.4)	18 (9.0)	106 (20.4)

Values are number (percentage).

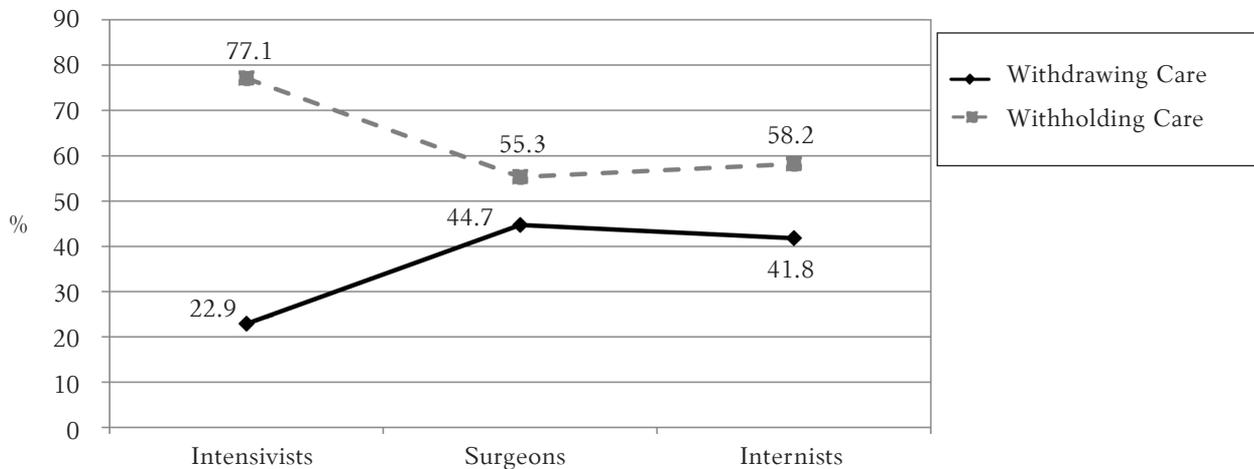


Fig. 2. “Which strategy is more acceptable when dealing with EOL decisions?”

**Discussion**

To our knowledge, this is the first study of this scale that analyzed aspects of FMC in Lithuania in general. We interviewed physicians from almost half of Lithuanian hospitals – general, regional, and university levels – providing intensive care, and about one-third of the practicing intensivists (218 of 697) participated in the study.

A statistically significant negative correlation between work experience and FMC case ratings was determined. This would indicate that with more clinical practice one’s attitude toward FMC gets more critical. We recognize that it takes years of work in the medical field for discrepancy between textbook medical cases and real life scenarios to become evident (11). Some researchers stated that more experienced physicians assess cases, which later prove to be futile, more accurately, suggest-

ing that skill of assessing treatment appropriateness develops with experience (11).

We identified statistically significant differences in FMC case ratings among specialty fields of intensive care, surgery, and internal medicine. Although mean evaluations among all specialty fields were negative, the provided cases were rated most negatively by intensivists, followed by surgeons. Moreover, physicians who stated that they often face futile care and the death of patients rated FMC cases statistically significantly more negative. This would suggest us to assume that specialists who are involved in more invasive procedures deem FMC more negatively, might be due to higher rates of complications and death they encounter in clinical practice.

While opinions differ between practicing physicians, one could not expect health legislators who

do not have clinical experience to have a more reliable point of view on defying standards of care. It is common practice worldwide that health care policy is made in coalition with physicians' associations, bioethicists, representatives of patients, and politicians. However, in Lithuania this authority is left mostly to governmental bodies. We believe that in order to achieve realistic health care standards, physicians should not be excluded from policy making. The policy is the reason why FMC is still executed in hospitals so widely throughout the world.

Almost two-thirds of the respondents favored the strategy of withholding care in futile situations. It is important to note that intensivists who most frequently face FMC significantly more frequently favored this strategy. We believe that physicians who encounter futility less commonly underestimate the pressure, intrinsic to withdrawing medical care. The similar Danish researchers' study revealed that "two thirds of intensivists found it to more difficult to withdraw therapy, rather than withholding it" (12). Other authors have also pointed out that withholding and withdrawing FMC are not the same or equivalent, but both are morally and ethically permissible (13).

One-third of the respondents stated that they often faced FMC in their daily practice, and only 2% said they had never encountered it. Data from Scandinavian studies showed that 80.7% to 92% of deaths in the ICU occurring after therapy were either withdrawn or withheld (12). FMC is a common problem worldwide; however, most countries have policies that deal with it ranging from unilateral withdrawal policies (14) to advanced directives (15) and bioethics committees (16). The fact that FMC is prevalent in Lithuania, but no attention is paid to it in legislations, signalizes the inconsistency between clinical practice and legal health care standards.

*Limitations and Strengths of the Study.* There are some limitations of our study. Firstly, the survey form was validated only by the pilot study. However, it was designed from results of previous qualitative study, when we interviewed experienced practicing intensivists. Secondly, it could be that only physi-

cians who negatively perceive FMC agreed to participate in the study (since they care about the issue and are willing to contribute for its research). Thirdly, the FMC cases provided in the questionnaire were derived from ICU scenarios. Therefore, other physicians might not have been clinically familiar with the treatment strategy provided.

The multi-centered design, variety of ICUs and hospitals involved, and the quantity of participants enabled us to gather a lot of data from all over the country and to have a possibility to draw conclusions from it. This kind of study is also conducted for the first time in Lithuania.

We believe the future studies would identify the perceived reasons of why and how alternatively FMC is practiced in Lithuania. Moreover, more studies should focus on defining the ways to prevent futility in medical care.

### Conclusions

The general evaluation of presented futile medical care cases was negative. Respectively, most of the respondents, especially intensivists, reported futile medical care cases as highly unwanted and disturbing phenomena while dealing with the end of life decision-making.

The differences in respondents' attitudes to futile medical care were largely affected by specialty field and work experience. In particular, most of anesthesiologists and intensivists comparing to surgeons assessed futile medical care as a negative phenomenon of medical practice. The correlation between of longer work experience and negative perception of futile care was found.

The respondents who were more often to face futile care and the death of patients rated futile medical care cases more negative. Finally, the lack of clear legislation and the influence of patients' relatives in the end-of-life decision-making in medical practice were reported as the most important reasons of futile medical care appearance in clinical practice.

### Statement of Conflict of Interest

The authors state no conflict of interest.

## Asmens sveikatos priežiūros profesionalų požiūris į užsispyrėlišką gydymą Lietuvoje

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**Raktažodžiai:** užsispyrėliškasis gydymas, intensyvioji terapija, gyvenimo pabaiga, sprendimų priėmimas, medicinos etika, gydytojų požiūris.

**Santrauka.** *Temos aktualumas ir tikslas.* Sprendimų priėmimas, susijęs su užsispyrėliško gydymo (angl. *futile medical care*) problemomis, išlieka aktualia šiuolaikinės klinikinės praktikos tema. Lietuvoje užsispyrėliško gydymo samprata beveik netyrinėta. Užsispyrėliško gydymo klausimas yra prieštaringas, nes bet kuris sveikatos priežiūros profesionalas susiduria su situacija, kada privalo teikti medicinos pagalbą, investuoti brangiai kainuojančias medžiagas bei savo žinias, nors akivaizdu, jog pacientas neišgyvens.

*Straipsnio tikslas* – išsiaiškinti Lietuvos gydytojų ir gydytojų rezidentų požiūrį į užsispyrėlišką gydymą ir įvertinti šio reiškinio ypatumus.

*Medžiaga ir metodai.* Tyrimo metu anonimiškai apklausti 548 anesteziologijos ir intensyviosios terapijos, chirurgijos ir vidaus ligų specialybių gydytojai. Anketoje jų klausėme apie skirtingus požiūrio į užsispyrėlišką gydymą aspektus.

*Rezultatai.* Gydytojų požiūris į užsispyrėlišką gydymą buvo neigiamas. Reikšmingai skyrėsi skirtingų specialybių gydytojų požiūris: labiausiai neigiamą užsispyrėliško gydymo situacijų vertinimą išreiškė anesteziologai-reanimatologai, pozityviausiai vertino vidaus ligų gydytojai. Ilgesnė darbo patirtis koreliavo su didėjančiu neigiamu užsispyrėliško gydymo atvejų vertinimu. Gydytojai, kurie dažniau susiduria su pacientų mirtimi, blogiau vertino užsispyrėlišką gydymą. Daugiau nei pusė respondentų palaikė medicininių intervencijų nepradėjimo strategiją gyvenimo pabaigos situacijose, tačiau tik anesteziologai-reanimatologai statistiškai reikšmingai dažniau rinkosi tokią strategiją.

*Išvada.* Lietuvos asmens sveikatos priežiūros profesionalų požiūris į užsispyrėlišką gydymą yra neigiamas ir dažniausiai priklauso nuo gydytojo specialybės ir darbo patirties.

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