

Attitudes of physicians to futile treatment at the end of life care

Ebrahim Shahryari¹, Mostafa Vahedian², Seyed Hasan Adeli^{3*}, Ehsan Jangholi⁴, Mohammad Gharehbeglou¹, Mahdi Mesgaranzadeh¹, Mohammad Javad Qasemzadeh¹, Ghahraman Ahdi¹, Mohammad Esmaeil Shahrzad⁵

¹ Department Of Medicine, Qom Branch, Islamic Azad University, Qom, Iran

² Master of Epidemiology, Clinical Research Development Center, Qom Medical science University, Qom, Iran

³ Assistance professor, Department of Internal Medicine, Medical Faculty, Qom university of medical science, Qom, Iran

⁴ Young Researchers Club, Islamic Azad University, Tehran Medical Branch, Tehran, Iran

⁵ Head of Student Research Committee of Hormozgan University of Medical Sciences, Bandar Abbas, Iran.

Abstract: Background: Medical futility in the care of a patient is referred to a case in which interventions for prevention, diagnosis, treatment, rehabilitation and other medical purposes, it is useless for the patient. Materials and Methods: This cross-sectional study was performed on 200 physicians serving in Medical Educational Centres in Qom, Iran from March 2011 to April 2012. Data collected from the questionnaire was twofold as follows: Part I and Part II contains demographic information and physicians' attitudes to futile treatment, respectively. Data analysis and statistical test Chi - square and t test and one-way ANOVA was performed using SPSS version 16. P<0.05 showed the statistical significance. Results: In this study, 200 physicians, including 51 (5/25%) women and 149 (5/74%) were male. The mean age of physicians was 41.3 ± 7.8 years. According to data on scores earned by all physicians after scoring from 0 to 25 the total of options according to the doctors at least 11 points and maximum 25 points received, the mean and standard deviation of the total score obtained in this study was 19.5 ± 3.1 . Difference between the mean male and female physicians' attitudes score toward futile treatment was significant ($p < 0.05$). Between age and work experience with the attitude there was positive correlation but not statistically significant. Between education and the workplace no statistically significant relationship was found. Conclusion: Considering the results of this study, there was a tendency to reduce exerting inappropriate treatments and futile procedures between health care professionals (HPCs) in Iran.

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1. Introduction

Since its first introduction over three decades ago, futility still remains controversial as an objective (value-free) criterion (Wijdicks and Rabinstein 2004). Medical futility emphasizes on all prophylactic, diagnostic, therapeutic and rehabilitated procedures that seemingly have no favorable and appropriate results (Woods 2001). Den Hollander showed the roles of the patients, physicians, politicians and society in futility-decisions in 2013 (Wijdicks and Rabinstein 2004). The correlation between healthcare staffs and patients is a main dimension of medical futility (Angelucci 2006). There has been a number of futility definitions based on diverse aspects of this concept. Hence different terms are used such as Physiological futility, Imminent demise futility, Lethal condition futility, Quantitative futility, Qualitative futility, Goal futility and Value futility to comprehensively illustrate medical futility (Jones and McCullough 2002, BM 2004, Aramesh 2008). Applying not necessary procedures to reduce the adverse psychological impact of a disease on the patient and family have raised criticism about

medical futility (Hariharan, Moseley et al. 2003, Lo 2009). Escalante et al showed the confrontation of ethical justification (included respect for independence, absence of beneficence, nonmaleficence, and fairness) and clinical decision-making by physicians. Also apparently Impact of medical futility and proper care, results of researches and cost on clinical decision-making by healthcare professionals was discussed (Escalante, Martin et al. 1997). Some authors believe that to manage and reduce medical futility also in order to have more favorable results during our institutional approaches, process-based hospital policies could be helpful (Aramesh 2008, Joseph 2011). Although respect for autonomy as a principle of ethic has been exerted, concerning some limitations we have with having the ability to decide when enough is enough; the decision should be made individually for each situation and may regardless of this respect. Accordingly, respect for autonomy usually is not merely (Aramesh 2008). Team decision-making is suggested in terms of considering both 'physicians' paternalism' and 'patients' autonomy'. However, we cannot only

consider to patients' autonomy. The authors believe that only paying attention to qualitative futility is not always a reliable indicator of appropriate approach and good managing the patients (Bagheri 2008). In spite of the fact that reviews which were held on medical futility cases in Iran are limited further studies and evaluations regarding the role of healthcare professionals in our medical futility should be implemented.

2. Material and Methods

We prepared answer sheets for the participants and judged about medical futility based on the results of the answer sheets which had been collected from them. In the first place we gave answer sheets to a few faculty members of medicine, since then Panel evaluated items on answer sheets by assessing content validity index (CVI) and content validity ratio (CVR). Questions which had less than 0.75 of CVI and CVR were excluded from our answer sheets. Following the finalization of the answer sheet, the answer sheets were answered by 20 non-affiliated physicians and The Cron- bach's coefficient alpha was 0.78. Answer sheets had been filled by 188 physicians who worked in Qom in 2012. P-value was estimated 0.4. Data were analyzed by SPSS14, also ANOVA, Chi-Square and t-test were exerted to evaluate our findings. $P<0.05$ showed the statistical significance.

3. Results

Our participant physicians were included 51 (25.5%) women and 149 (74.5%) men. The mean age at the time of answering the questions was 41.3 ± 7.8 years (range 26 to 69). The mean work-experience (The average of the work experience) of them was 12.3 ± 7.6 (range 1 to 40). 121 physicians (60.5%) were general physicians, while 79 physicians (39.5%) were specialists. Moreover 86 physicians (43%) worked at a governmental hospital whereas 25 physicians (12.5%) worked at private hospitals. Sixty four (32%) and 12 (6%) physicians worked at their office and for the charities respectively. Also, 13 physicians (6.5%) worked at different places and at the combination of the above-mentioned places at the time of our study (Table 1). Furthermore the correlation between different criteria such as age, gender, length of work experience and place of working with their judgments about medical futility was evaluated. Accordingly a meaningful correlation between the gender of the physicians and their answers was found ($p<0.05$). In spite of this fact we observed women physicians had better judgments about medical futility due to more considering the patients' opinion in finally making-decision. Although there was a correlation between gender of

the physicians and the results of our study, we found no significant connection between age, work experience, place of working and point of view of the physicians about medical futility ($p>0.05$).

Table1: The frequency distribution and the mean of factors related to the investigational units

	Number	Percent
Gender		
Male	149	74.5
Female	51	25.5
Specialty		
GP	121	60.5
Specialist	79	39.5
Place of job		
Public Hospital	86	43
Private Hospital	25	12.5
Charity	12	6
Office	64	32
Private & Public	13	6.5

GP: General Practice

Table 2: The mean and SD of physicians' attitude regarding to medical futility

	Mean \pm SD	The range points earned by physicians	The range points in questionnaire
The physicians judgment about medical futility	19.5 ± 3.1	11-25	0-25

Table3: The correlation between different criteria with the physicians' judgment about medical futility

	SD \pm mean	Statistical test	P value
Age	-	R=0.08	P=0.25
Work experience	-	R=0.06	P=0.38
Gender			
Female	20.3 ± 2.7	T=1.20	P=0.034
Male	19.1 ± 3.13		
Specialty		T=-1.87	P=0.062
GP	19.2 ± 2.9		
Specialist	20 ± 3.4		
Place of Job		F=1.50	P=0.20
Public Hospital	19.3 ± 3.5		
Private Hospital	20.7 ± 2.1		
Charity	20.1 ± 1.92		
Office	19.1 ± 3.2		
Private& Public	19.9 ± 2.8		

GP: General Practitioner

4. Discussions

In this study, we believe that final decision regarding what constitutes futile, should be made individually for each patient by physicians-clinical team. Although physicians' medical education and clinicians' clinical experiences are as effective as

patients' or substitutes' decision-makers demands, in this study more than 50% of physicians still believe that final implementation (decision-making) should be by the demand of patients or surrogate decision-makers. Bagheri et al reported that more than two-third (33%) of participants believed that we cannot only rely on the physicians' decision (Bagheri, Asai et al. 2006). This study also indicated that patients have right to make the final decision and their beliefs are essential in our approaches. In another study Bagheri et al Suggested to reduce futile we should consider physician's consultants as well as patients' demands. Since decision-making only regarding patients' demands presumably lead to higher expenses and inappropriate treatments (Bagheri 2008). Yun et al showed that most of the patients (87.3%) believed in withdrawal of futile life-sustaining treatment. Furthermore the impact of gender, age, religious and educational level of decision making was significantly reported meaningful (Yun, Han et al. 2011).

Since patients are more affirmative in offering futile treatments, Kadooka et al concluded that it is vital to exactly clarify the situation for patients and give medical information to them (Kadooka, Asai et al. 2012). In this study we also illustrated that one of the best ways to reduce futile medical procedures is to improve the physician-patient relationship and to comprehensively elucidate the situation for patients considering medical science and experiences. The expenses of non-survivors' treatments were reported higher than that for surviving patients. Therefore cost which is incurred has raised criticism about applying futile treatments on end-stage patients. Age and family desires of the patients, different opinions among physicians and legal considerations are factors which influence decisions in patients whom still undergo futile therapies (Hariharan, Moseley et al. 2003). Joseph reviewed 2007 to 2011 published empirical results about medical futility in terms of conflict resolution in association with the process-based hospital policies and guidelines (Joseph 2011). It shows that hospital policies have a noteworthy role in ensuring preferable results in managing end-of-life care. Accordingly, in this study we conclude that most of the participating physicians likewise tend to have clear futility policies and professional guidelines that should be implemented carefully. Some authors believe that however cardiopulmonary resuscitation (CPR) is considered futile in patients whom have a length of living of less than two days, if that patient is going to meet a person that is vital to whom in 24hours, CPR should be implemented (Aramesh 2008). The dilemma between respecting a dying patient's demand to meet someone in the last day of his/her life and the risk of futility being futile

in treatments, also a number of other complicated circumstances necessitate careful guidelines and clear policies. In the present study, all physicians believe that final decision should be made individually for each situation. Moreover the key to successful minimizing futile treatment and appropriate decision making is to comprehensively consider the medical scientific aspect as well as ethical aspect. Our study is in agreement with Gampel et al who answered this controversy question whether should health care professionals (HPC) freely refuse treatments over debatable cases, or provide the treatments as that be required (Gampel 2006).

On the other hand, some authors believe that nurses play vital role in ethical dilemmas which facing with medical futility. Nurses should be responsible for notifying the situation for patients and properly describe the evidences for them and their families to decrease the adverse psychological impact of blurred medical and clinical decision-making on them (Scanlon and Murphy 2012). Jox et al proposed that a good physician-patient relationship could be helpful and significantly has striking results (Jox, Schaider et al. 2012). In the present study, we report our experience on 200 answer sheets which were prepared for 180 physicians and 20 medicine affiliated faculty members. The study indicates that there was a tendency to reduce exerting inappropriate treatments and futile procedures between HPCs in Iran. Reducing medical futility and unnecessary treatments can play a significant role by means of diminishing expenses and costs. We suggest further studies to determine the dependency of HPCs to different criteria in final decision-making when facing with end-stage patients in Iran. Also, studies will be required to reveal novel approaches and guidelines which can reduce medical futility.

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Corresponding Author:

Seyed Hasan Adeli

Assistance professor, Department of Internal Medicine, Medical Faculty, Qom university of medical science. Qom, Iran.

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