

Doctors' authoritarianism in end-of-life treatment decisions. A comparison between Russia, Sweden and Germany

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Abstract

Objectives—*The study was performed in order to investigate how end-of-life decisions are influenced by cultural and sociopolitical circumstances and to explore the compliance of doctors with patient wishes*

Participants and measurement—*Five hundred and thirty-five physicians were surveyed in Sweden (Umeå), Germany (Rostock and Neubrandenburg), and in Russia (Arkhangelsk) by a questionnaire. The participants were recruited according to availability and are not representative. The questionnaire is based on the one developed by Molloy and co-workers in Canada which contains three case vignettes about an 82-year-old Alzheimer patient with an acute life-threatening condition; the questionnaire includes different levels of information about his treatment wishes. We have added various questions about attitudes determining doctors' decision making process (legal and ethical concerns, patient's and family wishes, hospital costs, patient's age and level of dementia and physician's religion).*

Results—*Swedish physicians chose fewer life-prolonging interventions as compared with the Russian and the German doctors. Swedish physicians would perform cardiopulmonary resuscitation (CPR) in the event of a cardiac arrest less frequently, followed by the German doctors. More than half the Russian physicians decided to perform CPR irrespective of the available information about the patient's wishes. Level of dementia emerged as the most powerful determining attitude-variable for the decision making in all three countries.*

Conclusions—*The lack of compliance with patient wishes among a substantial number of doctors points to the necessity of emphasising ethical aspects both in medical education and clinical practice. The inconsistency in the treatment decisions of doctors from different countries calls for social consensus in this matter.*

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Introduction

The care and treatment of severely ill incompetent patients is associated with some very complicated medical,^{1–4} ethical,^{5,6} and legal problems.^{7,8} The achievements of modern medicine in terms of

technology and treatment enable physicians to prolong life and to postpone death even in the presence of severely debilitating conditions. Often, however, beneficial medical technology may be harmful when used as a life-sustaining measure in terminally ill patients. Elderly people themselves often fear that an overzealous application of high-tech life-saving procedures will just prolong their suffering and compromise their dignity where there is a life-threatening condition.^{9,10} It is now widely agreed that in good clinical practice, when deciding on an appropriate level of treatment, physicians should consider the wishes of the patient^{11,12} and his or her family,^{13,14} the patient's prognosis,^{3,15} age and quality of life,^{2,16,17} the legal implications of providing or withholding care,^{7,18,19} the institution's policy, the availability and costs of health care resources²⁰ and the prevailing cultural and social norms. Do-not-resuscitate (DNR) orders and more extended advance directives (AD) have been developed^{14,21,22} in an attempt to increase patient autonomy and to reduce doctors' conflicts in their decision making. Some authors have highlighted the ethical tension between physician autonomy and patient autonomy.²³ This is further complicated by another ethical principle of medical practice: beneficence.²⁴ The utilisation of DNR orders and advance directives is regulated by laws in, for example, the US, Canada and Australia, but not in most European countries.

Studies have shown that a majority of patients would not feel disturbed by questions relating to their choice for or against CPR; would like to discuss DNR orders or advance directives under all circumstances; would prefer to maintain a good quality of life, even with a shorter life expectancy, and would not wish CPR, for example in case of severe dementia.^{25,26} Fortunately, discussions about the use of a DNR order or an advance directive initiated by physicians have been intensified following the implementation of laws in various countries. However, doctors on average spend only a few minutes of the time they devote to a particular patient discussing this topic.^{25,27,28} In most European countries it is obvious that many physicians are still reluctant to find out what the patient really wants.^{16,29–31} Processes and related determinants of doctors' decision making are relatively unexplored.

Table 1 Characteristics of the sample (in per cent - χ^2 ; df; p)

	Sweden	Germany (East)	Russia
Gender (45.84;2;<.0001)			
Male	70	60	35
Female	30	40	65
Age category (43.84;8;<.0001)			
20–29	6	20	11
30–39	41	48	40
40–49	45	15	33
50–59	6	13	14
60–69	2	4	2
Level of training (72.31;8;<.0001)			
Intern or resident	35	49	50
General practitioner	7	0	0
Specialist	55	51	50
Other	3	0	0
Number of years in practice (68.48;8;<.0001)			
0–9	68	60	32
10–19	24	19	34
20–29	6	12	28
30–39	2	9	5
40–49	0	0	1
Total number	104	191	232

In order to investigate how the decision making process is influenced by cultural and sociopolitical circumstances the present study was conducted using samples of physicians from three European countries with different health care systems: Sweden, Germany and Russia. The comparison with the Russian doctors is of particular interest because of differences in the medical curriculum and training in Russia and because of the strained situation within the Russian health care system, which is characterised by a widespread lack of various resources. The aims of the present study are a) to explore treatment decisions for severely ill incompetent patients in relation to underlying attitudes, and b) to test for crosscultural differences in the physicians' decisions and attitudes.

Methods

Physicians (see table 1 for characteristics of the sample), who frequently encountered treatment situations with incompetent elderly patients were surveyed in Sweden (Umeå), Germany (Rostock and Neubrandenburg), and in Russia (Arkhangelsk) by a questionnaire. The participants were recruited according to availability and are not representative. The questionnaire was administered either during regular grand rounds or individually.

Table 2 Treatment options given to physicians in the questionnaire

Option	Description
Supportive measures only (SUPP)	Measures that enhance comfort or minimise pain (for example, use of morphine); no intravenous lines; don't group & cross-match; don't investigate cause of bleeding; start intravenous line, cross-match and transfuse; N/G tube, blood tests and x-ray exam
Limited therapeutic effort (LIM)	Cimetidine or Ranitidine intravenous; don't transfer to intensive care unit (ICU); don't operate even if the patient continues to bleed
Maximum effort (MAX)	LIM plus the following: emergency gastroscopy if necessary; emergency surgery if necessary; don't ventilate (except for surgery)
Maximum effort with ICU (MICU)	MAX plus the following: transfer to ICU; if necessary; may insert central lines, etc if necessary

As far as general characteristics are concerned, the Russian doctors were to a larger extent female, older, and had more clinical experience compared with their Swedish and German counterparts. Furthermore, there were fewer residents and interns among the Swedish doctors.

The questionnaire in the present study is based on the original developed by Molloy and co-workers from McMaster University in Canada.^{32–34} It was translated according to established guidelines³⁵ and adapted to the various countries, considering the prevailing terminology. It contains three case vignettes, in each of which the same patient provides different levels of information about his treatment wishes (see table 2), and various questions about factors determining the doctor's decision making process (legal and ethical concerns, patient's and family wishes, hospital costs, patient's age and level of dementia and physician's religion—on a five-point scale). Finally, there were demographic questions about the physician's age, gender, level of training and years of practice. The presented case was as follows.

An 82-year-old is brought, accompanied by a nurse, to the emergency room with gastrointestinal bleeding. At the nursing home where he lives, he vomited copious amounts of blood and passed a large, abnormally dark stool earlier that night. He is now pale, stuporous, diaphoretic, understands simple commands, but can't answer simple questions coherently. His heart rate is 120 beats/minute and his blood pressure is 70/40 mm/Hg. The note from the nursing home states that he was investigated three years ago by a neurologist, who diagnosed Alzheimer's disease following a complete investigation. The nurse describes him as an active 82-year-old, who occasionally displays agitated behaviour with the staff. He needs assistance washing and dressing and wanders about during the day. He has difficulty remembering names and occasionally does not recognise his daughter. He is incontinent of urine all the time and incontinent of faeces occasionally.

Three different paragraphs were added at the end of the case-vignette indicating the level of information about his treatment wishes.

- 1) The first, none-information situation is as follows: The patient's daughter, who is his only living relative, is away on holiday. His family physician is at a conference, and his locum is unable to give any further information.

- 2) In the second situation a DNR request is available, written by the family physician on a doctor's order sheet in the nursing home, which is cosigned by the daughter. This paragraph read as follows: "A note from the family physician indicates that three weeks previously the patient and his daughter had requested that in the event of a cardiac arrest no attempt should be made to resuscitate the patient".
- 3) In the third situation a completed detailed therapeutic and resuscitative effort chart (DTREC), including an advance directive (AD), was available: The family physician has spoken to the patient, his daughter and the primary care physician in the nursing home and other concerned health professionals. They have documented the wishes of the patient and his daughter in the event of cardiac arrest or acute life-threatening illness. The purpose of discussions and documentation was to provide guidance and facilitate clinical decision making by physicians who are not familiar with the patient or his wishes regarding treatment. The patient, his daughter, and the family physician had each chosen the maximum therapeutic effort (MAX) (see table 1). The signatures of both the patient and his family physician were included to maximise the likelihood of another physician complying with the expressed wishes in the patient's directive. In addition, it was also stated that in the event of cardiac arrest no cardiopulmonary resuscitation (CPR) be attempted.

The physicians were asked to choose one of the four treatment options which are shown in table 1 and to indicate whether they would attempt CPR in the event of cardiac arrest.

Data analysis

We calculated χ -square tests, one-way Anovas, and simple factorial ANOVAs (df = degrees of freedom, depends on sample size; p = probability of significant differences) with attitude variables as covariates in order to explore differences in decision making between the groups under study. Also, multiple regression analyses (method: enter stepwise) have been applied for testing for relationships between attitude-variables in the treatment of the elderly and chosen treatment-option concerning the three different scenarios. Because of multiple tests of comparisons and relationships only findings at the level of $p < .01$ were considered in order to minimise the risk of overinterpretations. Statistical data analysis has been performed by SPSS 5.1 on an Apple Macintosh computer.

Results

CHOSEN TREATMENT OPTION

There are significant differences between the Swedish, the German and the Russian doctors as to the treatment choices for all three situations (table 3). In each case, the Swedish physicians decided, on

Table 3 Treatment decisions by country (%)

	Swedish	German	Russian
No information situation (49.59;6;<.0001)*			
Palliative	9	2	5
Limited	46	15	22
Maximum	28	46	44
Maximum plus intensive care unit	17	37	28
Resuscitation—yes	23	48	74
(77.81;2;<.0001)			
DNR situation (23.71;6;.0006)			
Palliative	8	3	10
Limited	33	19	28
Maximum	50	53	42
Maximum plus intensive care unit	9	25	20
Resuscitation—yes	15	32	52
(45.65;2;<.0001)			
Advance directive situation (56.52;6;<.0001)			
Palliative	8	2	1
Limited	33	16	11
Maximum	50	42	53
Maximum plus intensive care unit	9	40	35
Resuscitation—yes*	15	26	72
(135.04;2;<.0001)			

*(χ^2 ; df; p) for differences between physicians according to country.

average, for less intensive options. The Russian and the German doctors did not differ from each other as to the chosen level of treatment.

The background variables (age, gender, level of training, years of practice) seemed of minor importance for the treatment choices. Swedish female doctors chose less intensive options than males for the "no info" situation (χ -square = 17.69; df = 3; p = .0005) whereas those German physicians who had a longer period of clinical experience decided for a less intensive treatment level for the DNR situation (χ -square = 22.64; df = 9; p = .007).

The importance attached to the level of dementia emerged as the most powerful determining attitude-variable. It remains as a covariate within stepwise multiple regressions as the most predictive variable for all three samples and all situations (multiple regression r^2 between .27 and .11; p < .0001).

CPR DECISIONS

The Swedish physicians would perform CPR in the event of a cardiac arrest in fewer cases, followed by the German physicians (table 3). More than half the Russian physicians decided to perform CPR independently of the available information about patient wishes. For the Swedish and the German physicians, there was a trend to a reduced CPR rate with increasing information about patient wishes. For the Russian group the likelihood of performing CPR was the same in the none information situation as in the the AD situation.

The data analysis yielded no significant relationships between the background variables and the CPR decisions for the Swedish and the Russian physicians. For the German sample only, the number of years in clinical practice influenced the probability of performing CPR in the DNR situation (χ -square = 22.64; df = 9; p = .007); the

Table 4 Questions about the decisions by country

	No information situation			DNR order situation			Advance directive situation		
	Sw	Ge	Ru	Sw	Ge	Ru	Sw	Ge	Ru
Difficulty of the decision									
No difficulty	12	29	33	18	18	37	17	17	43
Very little difficulty	32	23	25	24	24	25	33	27	21
Little difficulty	16	25	22	25	22	20	18	28	20
Some difficulty	39	18	13	30	32	15	29	24	11
Very difficult	1	5	7	3	4	3	3	4	5
Differences (χ^2 ; df; p)	44.38;8;<.0001			33.76;8;<.0001			56.17;8;<.0001		
Help by patient's directive									
Not at all				23	35	52	24	28	52
Very little				18	14	17	12	13	13
A little				28	14	6	22	18	10
Some				19	19	13	27	23	12
Much				12	18	12	15	18	13
Differences (χ^2 ; df; p)				50.92;8;<.0001			42.82;8;<.0001		

level of training had an effect concerning the CPR decision in the "no info" situation (χ -square = 9.91; df = 2; p = .007), implying that the more clinical experience or the higher the level of training the less often German doctors decided to perform CPR.

The perceived importance of hospital costs, the religious beliefs of the physician and legal aspects were not related to the probability of CPR in any of the situations. The more that important general ethical concerns were found in the Swedish group, the less often they decided to perform CPR in each of the situations (χ -square between 15.00; df = 2; p = .0006 for "no info" and χ -square = 24.59; df = 2; p < .0001 for AD). Corresponding findings were established for the Swedish physicians as concerns patient wishes for the Swedish situation (χ -square = 16.42; df = 2; p = .003) and for the AD situation (χ -square = 16.31; df = 9; p = .003). The more important the age of a patient was considered by the Russian physicians the higher the probability was that CPR would be performed in the "no info" situation (χ -square = 17.20; df = 2; p = .002) as well as in the DNR situation (χ -square = 30.68; df = 2; p < .0001). The level of dementia was related to CPR decisions in each group. The more important the Swedish and the German physicians perceived this issue to be the more frequently they decided not to perform CPR (Swedish: χ -square between 11.57; df = 4; p = .0209 for "no info" and χ -square = 14.65; df = 4; p = .0055 for AD/German: χ -square between 11.48; df = 4; p = .0217 for AD and χ -square = 17.52; df = 4; p = .0015 for "no info"). There was an inverse relationship for the Russian doctors: the more important they perceived the level of dementia to be the more often they would perform CPR in each situation (χ -square between 11.45; df = 4; p = .0219 for AD and χ -square = 25.09; df = 4; p < .0001 for DNR).

Difficulty in decision making

The Russian doctors reported fewer difficulties in their decision making compared to both Germans and Swedes for each situation (tables 4 and 5). And exclusively for the "no info" situation the Russians reported the fewest difficulties in decision making;

the Germans reported more difficulties than the Russians and the Swedes reported the most difficulties.

The fewer difficulties German and Russian physicians reported for the "no info" situation the more likely they were to choose a more intensive treatment option (German: χ -square = 44.24; df = 12; p < .0001; Russian: χ -square = 41.80; df = 12; p < .0001). A comparable relationship was found for the Russians concerning the DNR situation (χ -square = 30.82; df = 12; p = .0021). For the Swedish and for the German group a reverse relationship occurred, ie, the more difficulties the more likely was a more intensive option to be chosen (χ -square = 31.92; df = 12; p = .0014/ χ -square = 25.83; df = 12; p = .0113). For the German doctors only, a significant relationship was found between the perceived difficulties in decision making and the treatment option chosen for the AD situation. When they scored more difficulties then they were more likely to prefer less intensive treatment options (χ -square = 34.44; df = 12; p = .0006).

The decision to perform CPR was rated as statistically independent of the perceived difficulties in each situation across the countries.

Furthermore, for the Russian doctors only, the less importance they attached to family wishes and patient wishes for the AD situation, the less difficult the decision was for them (χ -square = 44.17; df = 16; p = .0002/ χ -square = 43.71; df = 16; p = .0002).

HELP FROM INFORMATION ABOUT PATIENT WISHES (DNR ORDER AND/OR ADVANCE DIRECTIVE)

Significant differences occurred between the groups for both situations (table 4) implying that the Russian physicians were less influenced by patients' wishes than the other groups.

In each group the physicians who perceived the patient DNR to be of more benefit were the more likely to favour less intensive treatment options (χ -square between 49.57; df = 12; p < .0001 for the German and χ -square = 33.21; df = 12; p = .0009 for the Swedish). Whereas we could not find any

Table 5 *Importance of various attitudes for the decision making (mean/sd and differences between the samples one-way analysis of variance - F; df; p)*

	Swedish	German	Russian
Ethical factors (9.54;2;.0001)	1.71/.57	1.71/.73	2.02/.95
Patient wishes (44.14;2;<.0001)	1.85/.80	2.08/.95	2.83/1.16
Level of dementia (32.24;2;<.0001)	2.76/.93	3.77/1.03	3.61/1.16
Legal factors (5.26;2;.0055)	2.81/1.06	2.88/1.22	2.51/1.29
Family wishes (38.75;2;<.0001)	2.99/.91	3.87/.86	3.16/1.08
Patient's age (1.88;2;.1531—n.s.)	3.42/.90	3.64/1.03	3.65/1.14
Religious beliefs (1.78;2;.1698—n.s.)	4.33/1.14	4.12/1.27	4.32/1.07
Hospital costs (164.25;2;<.0001)	4.55/.67	4.52/.77	2.99/1.20

relationship between the level of help and chosen treatment option for the Russian physicians, the Swedish as well as the German physicians were more compliant with the advance directive the more they derived benefit from this document (Swedish: χ -square = 30.06; df = 12; p = .0027/German: χ -square = 23.43; df = 12; p = .0243).

Correspondingly, if a physician from Sweden or Germany had decided to perform CPR in the event of a cardiac arrest he or she was more likely to perceive only a small amount of benefit from the DNR order. Similar relationships were established concerning the advance directive for all groups (χ -square between 67.29; df = 4; p < .0001 for German—DNR and χ -square = 20.02; df = 4; p = .0005 for Swedish—AD).

There was only one significant influence of the background variables among the Russian physicians, and this implied that the younger they were the higher was the benefit they derived from the advance directive (χ -square = 47.41; df = 16; p < .0001).

Discussion

The interpretation of the results is limited by the hypothetical character of the situations and by the nonrepresentativeness of the samples under study. Nevertheless, some important findings can be discussed because the results from the various countries are based on the same standardised method.

Whereas Swedish doctors chose, on average, less intensive treatment options, their German and Russian colleagues were at a level similar to each other. Possibly, the Swedish physicians could be characterised as having less fearful attitudes towards dying and death. Swedish and German physicians are similar as to CPR decisions. It became obvious that the more information about patients' wishes was available (DNR order and AD) the fewer attempts were made, indicating fewer conflicts in decision making. This underlines the usefulness of detailed patient directives.^{21 25 36 37} However, more than 50 per cent of the Russian doctors would perform CPR irrespective of the available information about patient wishes. This might be due to their strong authoritarian attitudes, which we discovered in another aspect of our study³⁸ and/or their almost total unfamiliarity with such patient documents. The authoritarianism of the Russian physicians is confirmed by the

relationship between fewer difficulties in decision making and more intensive level of treatment. Possibly, they are actually confronted with basic problems in their health care system such as a lack of financial and medical resources. Nevertheless, it is striking that many of the physicians did not comply with the patient's wishes for non-resuscitation, not even in a hypothetical situation.

Notably, the more the physicians in general derived benefit for their decision making from the advance directive, the less intensive and the more compliant they were in their decisions in general.³¹ However, even if the Russian doctors in general got less benefit from this document there is some reason for optimism, since it was the younger Russian doctors who derived more help from it. The younger generation of Russian physicians might be more open-minded than the older generation of physicians.

A positive finding which should be emphasised is that the physicians from all participating countries regarded ethical factors and patients' wishes as more important, and their own religious beliefs and hospital costs as less important, in their decision process in the treatment of elderly people. The established relationship between level of dementia and the treatment decisions in all subsamples led us to assume that these factors exert a greater influence on the physicians' treatment decision than they had conveyed by their answers concerning the importance of various factors.

This study indicates that a relatively large number of doctors would not act according to the explicit wishes of the patient, especially in Russia. Furthermore, the treatment of incompetent elderly patients with life-threatening illness varies widely within and between the three countries under investigation. These inconsistencies may reflect differences in underlying values and lack of societal consensus. One possible explanation could be the conflict between the doctor's and the patient's autonomy^{23 34} and also between the doctor's duty of beneficence and the patient's autonomy. A societal consensus should be obtained, guaranteeing the right of every human being to make his/her choice of treatment, and to use an advance directive, which could serve as a guideline for doctors.^{11 39} Generally, our results underline that communication with patients and their relatives and the exchange of information are essential factors in the promoting of ethical decisions. Consequently, communication skills and the ethical issues of clinical practice

should be a mandatory part of the medical curriculum.¹¹⁻³⁹ This could result in a more pronounced view of the patient as a subject, with the consideration of his/her wishes as to treatment, becoming part of the decision making process, alongside prognosis and quality of life.

Finally, the very divergent views of doctors from different countries on the issues of the present study call for a social consensus of how treatment decisions should be made. This seems even more appropriate because of the increasing mobility of people between countries. Before implementing uniform standards for decision making in health care, however, the legal prerequisites have to be established.

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References

- Bruce-Jones P, Roberts H, Bowker L, Cooney V. Resuscitating the elderly: what do the patients want? *Journal of Medical Ethics* 1996;22:154-9.
- Brymer C, Gangbar E, O'Rourke K, Naglie G. Age as determinant of cardiopulmonary resuscitation outcome in the coronary care unit. *Journal of the American Geriatric Society* 1995;43:634-7.
- Denton R, Thomas AN. Cardiopulmonary resuscitation: a retrospective review. *Anaesthesia* 1997;52:324-7.
- Rogove HJ, Safar P, Sutton-Tyrrell K, Abramson NS. Older age does not negate good cerebral outcome after cardiopulmonary resuscitation: analyses from the brain resuscitation clinical trials. The brain resuscitation clinical trial I and II study groups. *Critical Care Medicine* 1995;23:18-25.
- Schechter WP. Withdrawing and withholding life support in geriatric surgical patients. Ethical considerations. *Surgical Clinics of North America* 1994;74:245-9.
- Thomasma DC. The ethical challenge of providing health care for the elderly. *Cambridge Quarterly of Health Care Ethics* 1994;4:148-62.
- Kapp MB. Therapeutic jurisprudence and end-of-life medical care: physician perceptions of a statute's impact. *Medicine and Law* 1996;15:201-17.
- Whithe BD, Singer PA, Siegler M. Continuing problems with patient self-determination. *American Journal of Medical Quality* 1993;8:187-93.
- Eisemann M, Richter J. Relationships between various attitudes towards self-determination in health care with special reference to an advance directive. *Journal of Medical Ethics* 1999;25:37-41.
- Noelle-Neumann E. Senioren im Pflegemarkt: Die Alten wissen, was sie wollen. *Pflege-Zeitschrift* 1995;48:733.
- Davitt JK, Kayne LW. Supporting patient autonomy: decision making in home care. *Social Worker* 1996;41:41-50.
- Guyatt GH, Mitchell A, Molloy DW, Capretta R, Horsman J, Griffith L. Measuring patient and relative satisfaction with level of aggressive care and involvement in care decisions in the context of life threatening illness. *Journal of Clinical Epidemiology* 1995;48:1215-24.
- Pinch WJ, Parsons ME. The ethics of treatment decision making: the elderly patient's perspective. The vast resources—and costs—of available technology makes it crucial that we understand what the patient wants. *Geriatric Nursing* 1993;14:289-93.
- Molloy DW, Mepham V. *Let me decide*. Toronto: Penguin, 1992.
- American Geriatrics Society: position statement. *Medical treatment decisions concerning elderly persons*. Washington: American Geriatrics Society, 1990.
- Melltorp G, Nilstun T. Age and life-sustaining treatment. Attitudes of intensive care unit professionals. *Acta Anaesthesiologica Scandinavica* 1996;40:904-8.
- Scharf S, Flamer H, Christophidis N. Age as a basis for health-care rationing. Arguments against agism. *Drugs and Aging* 1996;9:399-402.
- Samuels A. The advance directive (or living will). *Medicine, Science and the Law* 1996;36:2-8.
- Kapp MB. State statutes limiting advance directives: death warrants or life sentences? *Journal of the American Geriatric Society* 1992;40:722-6.
- Molloy DW, Urbanyi M, Horsman JR, Guyatt GH. Two years of experience with a comprehensive health care directive in a home for the aged. *Annals of the Royal College of Physicians and Surgeons* 1992;25:433-6.
- Emanuel LL, Barry MJ, Emanuel EJ, Stoeckle JD. Advance directives: can patients' stated treatment choices be used to infer unstated choices? *Medical Care* 1994;32:95-105.
- Kelner M, Bourgeault IL, Hebert PC, Dunn EV. Advance directives: the view of health care professionals. *Journal of the Canadian Medical Association* 1993;148:1331-8.
- Johnson SC. Advance directives: from the perspective of the patient and the physician. *Journal of the Royal Society of Medicine* 1996;89:568-70.
- Mohr M. Ethical conflicts during anaesthesia. "Do not resuscitate" orders in the operating room. *Anaesthetist* 1997;46:267-74.
- Layon AJ, Dirk L. Resuscitation and DNR: ethical aspects for anaesthetists. *Canadian Journal of Anaesthesiology* 1995;42:134-40.
- Lynn J, Teno JM, Phillips RS, Wu AW, Desbiens N, Harold J, et al. Perceptions by family members of the dying experience of older and seriously ill patients. *Annals of Internal Medicine* 1997;126:97-106.
- Tulsky JA, Fischer GS, Rose MR, Arnold RM. Opening the black box: How do physicians communicate about advance directives? *Annals of Internal Medicine* 1998;129:441-9.
- Ryan CJ. Betting your life: an argument against certain advance directives. *Journal of Medical Ethics* 1996;22:95-9.
- Lofmark R, Nilstun T. Do-not-resuscitate orders - should the patient be informed? *Journal of Internal Medicine* 1997;241:421-5.
- Lofmark R, Nilstun T. Informing patients and relatives about do-not-resuscitate decisions. Attitudes of cardiologists and nurses in Sweden. *Journal of Internal Medicine* 1998;243:191-5.
- Richter J, Eisemann M, Bauer B, Kreibeck H. Entscheidungen und Einstellungen bei der Behandlung inkompetenter, chronisch kranker, alter Menschen. Ein Vergleich zwischen Krankenschwestern und Ärzten - oder: Warum fragt keiner die Krankenschwester? *Zeitschrift für Geriatrie und Gerontologie* 1999;32:131-8.
- Alemayehu E, Molloy DW, Guyatt GH, Singer J, Penington G, Basile J, et al. Variability in physicians' decision on caring for chronically ill elderly patients: an international study. *Journal of the Canadian Medical Association* 1991;199:1133-8.
- Molloy DW, Guyatt GH, Alemayehu E. Treatment preferences, attitudes toward advance directive and concerns about health care. *Humane Medicine* 1991;7:285-90.
- Molloy DW, Guyatt GH, Alemayehu E, McIlroy W, Willan A, Eisemann M, et al. Factors affecting physicians' decision on caring for an incompetent elderly patient: an international study. *Journal of the Canadian Medical Association* 1991;145(8):947-952.
- Sartorius N, Kuyken W. Translation of health status instruments. In: Orley J, Kuyken W, eds. *Quality of life assessment: international perspectives*. Berlin Heidelberg: Springer Verlag, 1994: 3-18.
- Arenson CA, Novielli KD, Chambers CV, Perkel RL. The importance of advance directives in primary care. *Primary Care* 1996;23:67-82.
- Cowe F. Living wills: making patients' wishes known. *Professional Nurse* 1996;11:362-3.
- Richter J, Eisemann M, Zgonnikova E. Personality characteristics of physicians and end-of-life decisions. An investigation of doctors from Russia. *European Journal of Public Health* 2000 [submitted].
- Murphy C, Sweeney MA. Conflict resolution with end of life decisions in critical care settings. *Medical Informatics* 1995;8: part 2:1696.