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## Attitudes towards organ donation and transplantation – a study involving Baltic physicians

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**Abstract** The aim of this study was to identify and describe attitudes towards organ donation and transplantation among a group of Baltic physicians who are involved in this aspect of medical care. A total of 151 neurosurgeons, anesthesiologists, and neurologists anonymously answered a questionnaire between February and March 1995. The majority of physicians said they would be willing to donate their own organs after their death but disagreed with the idea of using organs from a dead person who had had a negative opinion towards organ donation. Given a patient who fulfilled the criteria for brain death, this group of physicians found it widely acceptable to keep the patient on a ventilator until organ donation could take place. We conclude that the participating physicians generally have similar attitudes towards organ donation and transplantation. This study is valuable in that it shows the interest in, and the need for, clinical and research collaboration, includ-

ing a discussion of ethics, within the area of organ donation and transplantation. This is essential for future collaboration with Western countries.

**Key words** Attitudes, organ donation · Organ donation, attitudes · Organ donation, Baltic states

### Introduction

In recent years, the Baltic states have undergone a revolutionary political process. This has allowed an exchange of information and a budding collaboration with Western countries in different sectors of society, such as health care. Collaboration between the Baltic and the Nordic countries seems especially natural because of their historical and geographical relationship.

Recently, cooperation in the area of organ donation and transplantation has begun. Balttransplant, the organization of organ donation and transplantation in the three Baltic states – Estonia, Latvia, and Lithuania – has asked for membership in Scandiatransplant, their Nordic counterpart. Informal work started to narrow the gap between the Baltic and Nordic countries. This resulted in 1996 in an “Agreement on the future collaboration within Scandiatransplant and Balttransplant”.

**Table 1** Distribution of the questionnaire

	Estonia	Latvia	Lithuania	Total
Number distributed	66	50	59	175
Excluded	2	1	1	4
No answer	–	20	–	20
Total responses	64	29	58	151
Neurosurgeons	4	3	23	
Neurologists	27	1	1	
Anesthesiologists	33	25	33	

Before such collaboration can expand, certain problems still have to be solved. In addition to the problematic financial situation in the Baltic countries, there is a need to update national legislation governing organ donation and transplantation. It is also essential to educate both professionals and the general population with regard to medical and ethical aspects of organ transplantation [3].

Increased interaction between these organizations has to be built upon mutual trust and acceptance of common basic ethical values, and an awareness of societal differences between the countries is essential. Bio-ethical problems were not high on the national agenda in these countries of the former Soviet Union during communist rule. To date, there has been little opportunity either to increase public awareness and discussion of ethics or to address the problems legislatively [4].

Organ donation and transplantation activities are dependent upon legislation, attitudes of the general public and health care personnel, and the organization of transplant units. In the Nordic countries, the laws governing consent to organ donation are based on the principle of autonomy [1]. "... the core idea of personal autonomy is an extension of political self-rule to self-governance by the individual" [2]. The principle of autonomy versus the principle of beneficence is often discussed in the context of organ donation and transplantation. The individual's right to decide the fate of his/her own body versus the need of an ill person for a donated organ has legislative as well as ethical implications. Another common principle is the principle of justice and fairness, which is discussed when organs are to be allocated.

Attitudes towards organ donation and transplantation have been studied in different countries, both among the general public and among health care professionals [6, 8, 9]. In connection with a course on organ transplantation for the Baltic countries in 1994, a pilot study was performed, the aim of which was to identify and describe attitudes towards organ donation and transplantation by analyzing responses to a questionnaire. Eleven Baltic physicians who were directly involved in renal transplantation as surgeons or immunologists formed the study group [5]. As a result of this study, the questionnaire was distributed among a larger number of physicians in the Baltic countries, including

those working in intensive care units. The aim of the present study was to identify and describe attitudes towards organ donation and transplantation among a group of Baltic physicians who are involved in this aspect of medical care.

## Materials and methods

A questionnaire was filled out by 151 Baltic physicians between February and March 1995. The physicians anonymously answered questions on attitudes toward various aspects of organ donation and transplantation. The original questionnaire was developed in Sweden – in English – by the three Swedish authors. This questionnaire was then translated locally and distributed during professional meetings (in Estonia and Latvia) and by mail (in Latvia). The Lithuanian translation was done in Sweden by a native Lithuanian physician, and the distribution took place in connection with organ donation.

The questionnaire focused on consent to organ donation, brain death criteria, patient information, rewarded gifting, reimbursement, and living donor transplantation. All questions, except those concerning background data, were scaled from "strongly agree" to "strongly disagree" and included the option "undecided". Those who strongly agreed and those who simply agreed are combined and presented here as "agreed" (the same was done for "strongly disagree" and "disagree"). In this paper we present the answers to the questions related to the attitude towards organ donation.

For statistical evaluation, Fischer's exact test was used. A *P*-value below 0.05 was considered significant.

## Results

A total of 151 neurosurgeons, anesthesiologists, and neurologists with varying experience with organ donation answered the questionnaire. They included 64 from Estonia, 29 from Latvia, and 58 from Lithuania. The majority of respondents from all three countries were anesthesiologists (Table 1).

Most of the physicians were willing to donate their organs after their death: 78%, 55%, and 69% agreed in Estonia, Latvia, and Lithuania, respectively. The majority were also willing, to undergo transplantation themselves: 87%, 45%, and 74% in the three countries, respectively (Table 2). When it came to donating the organs of relatives whose opinions on organ donation they did not know, approximately 50% of the physicians in Estonia and Lithuania agreed, compared to less than 30% of the Latvian physicians. The differences between Latvia and Estonia were statistically significant with regard to undergoing transplantation ( $P = 0.002$ ) and donating organs of relatives ( $P = 0.03$ ; Table 2).

The majority of physicians – 52%, 59%, and 66% in Estonia, Latvia, and Lithuania, respectively – disagreed with the idea of using organs from a dead person who had had a negative attitude towards organ donation, even though there is a desperate need for organs. However, more than one-third of the Estonian physicians



**Table 4** Legislation regarding transplantation in the Baltic countries

	Brain death	Transplant law	Consent
Estonia	1993	Under way	Presumed consent, changed to nonpresumed consent in 1997
Latvia	1991	1991	Presumed consent
Lithuania	1993	1993: Temporary rules 1996: Law	Nonpresumed consent

wards organ donation will be positive. Furthermore, the results must be considered in light of the circumstances in each country at the time of the study.

The method of translation and distribution of the questionnaire may have had an influence on the outcome. The translation of the questionnaire was done from English into the different languages in the Baltic countries. A check-up translation back to English was not performed. A fairly even number of anesthesiologists in each country responded to the questionnaire. However, in Estonia and Latvia, very few neurosurgeons responded, and in Latvia and Lithuania, only a few neurologists completed the questionnaire. This is due to the method of distribution, which took place during professional meetings, by mail and, in Lithuania, in connection with organ donation. Different categories of physicians were involved in these different activities, but this was the only possible way of distribution at that time. We have no explanation for the low response rate in Latvia, and we suspect that it had a significant influence on the outcome. The response from the Lithuanian physicians may have been affected by the fact that they filled out the questionnaire in connection with organ donation. One must also consider the possibility that the physicians answered according to what they thought was the wish of the distributor of the questionnaire.

The answers to the questions were quite similar in Estonia and Lithuania. Compared to their Estonian colleagues, Latvian physicians were more unsure of, or not interested in, donating their relatives' organs after death or receiving transplant themselves. The reason for this difference is unknown. Perhaps the Latvian physicians have less information about organ donation and transplantation than their colleagues in the other Baltic countries. If a higher proportion of the questionnaires distributed had been answered in Latvia, the results might have been different. The responding Latvian physicians were almost all anesthesiologists, while in the other two countries the number of anesthesiologists approached 50% of the respondents.

Access to organs is crucial for a successful transplant program. In Western Europe, the attitudes of the popu-

lation towards the health care system in general and towards transplantation activities in particular are of great importance for the availability of organs. Respect for a person during life and after death and honesty are important factors for promoting trust and, in the long run, for securing organs for transplantation. During the totalitarian regime in the Baltic countries, these factors were not crucial. Access to organs for transplantation was secured because organs were considered the possession of the state. In the current period of transition, it is especially important to have an open debate regarding consent for organ donation. Legislation regarding transplantation in the Baltic countries is shown in Table 4. The majority of physicians in all three countries would not use organs from a person who, in his lifetime, expressed a negative attitude towards donation, despite the desperate need for organs. However, some physicians did agree to use the organs in this case. This reflects the circumstances during the Soviet era. Some physicians might also have an opinion that differs from that mandated by law.

In Lithuania, nobody was against the idea of keeping a patient on a ventilator until organ donation could take place. However, the answers to this question may have been influenced by the fact that the questionnaire was distributed in connection with organ procurement.

The scenario in the Baltic countries has changed since 1995. All three countries now have transplant coordinators who participate in the promotion of organ donation and transplantation. They make regular visits to the intensive care units, provide results about transplant recipients, and educate the public about the procedures involved in organ donation. This also makes it possible to better understand the different attitudes. Brain death, organ donation, and transplantation need to be discussed continuously. "A continuous system of information and motivation seems to be of utmost importance to assure constant (or even increasing) numbers of organ donors" [9]. From a Latvian point of view, the hard work done during 1997, which involved foreign lecturers educating the medical staff (mainly those working in intensive care units, neurology, and neurosurgery) has resulted in a more positive attitude towards organ donation, at least according to the transplant surgeon involved.

The present study is valuable in that it shows the interest in, and the need for, clinical and research collaboration between the Nordic and Baltic countries. This collaboration seems natural since the Nordic and Baltic countries have an historical and a geographical relationship, plus the fact that the three Baltic countries have asked for membership in Scandiatransplant, their Nordic counterpart. The next step to be taken to enhance such collaboration includes fund-raising for different projects between the Baltic and Nordic countries. One wish is a common computer system. The Nordic council

has now granted money to be put towards these projects.

It is clear from this study that the participating physicians in all three Baltic countries have generally similar attitudes towards organ donation and transplantation. The Latvian physicians tend to be more reluctant to donate their own organs or those of their relatives and to undergo transplantation themselves than their colleagues in Estonia and Lithuania.

This is the first study to focus on attitudes towards organ donation and transplantation involving people from Sweden and the Baltic countries. We feel we have intro-

duced a structured way of evaluating ethical matters in this field that may indirectly have an impact on the number of organs available for transplantation. We feel it is important to maintain an ongoing discussion about ethics with regard to organ donation and transplantation. The transplant coordinators in the Baltic countries have an important task to perform and can provide needed input in such a debate.

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## References

1. Aspelin E, Kokkonen P (1994) Laws and orders. *Nord Med*, pp 174–179
2. Beauchamp TL, Childress JF (1989) *Principles of biomedical ethics*, 3rd edn. Oxford University Press, New York, pp 307–365
3. Dainis B, Dmitriev P, Rosental R (1992–93) Clinical transplantation in the Baltic states. *Scandiatransplant*, pp 66–68
4. Nicholson R (1992) Bioethics developments will come later in the new Eastern Europe: 1989–1991. In: Lustig AB (ed) *Bioethics yearbook*. Kluwer, The Netherlands, pp 233–250
5. Omnell Persson M, Persson NH, Hermerén G (1995) Attitudes to organ donation and transplantation – a pilot study among Baltic doctors (abstract). 9th Congress of the European Transplant Coordinators Organization
6. Pearson IY, Zurynski Y (1995) A survey of personal and professional attitudes of intensivists to organ donation and transplantation. *Anaesth Intensive Care* 23: 68–74
7. Prottas J, Levine H (1988) Health professionals and hospital administrators in organ procurement: attitudes, reservation, and their resolutions. *Am J Public Health* 78: 642–645
8. Siminoff LA, Arnold RM, Caplan AL (1995) Health care professional attitudes toward donation: effect on practice and procurement. *J Trauma* 39: 553–559
9. Wamser P, Goetzinger P, Gnant M, Sautner T, Steininger R, Mühlbacher F (1993) What do intensive care unit personnel think about organ donation? Opinion poll amongst transplant centers. *Transplant Proc* 25: 3122–3123