

# Trauma and tribulation: the experiences and attitudes of operating room nurses working with organ donors

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**Trauma and tribulation: the experience of operating room nurses working with donors**

**Background.** In the past two decades, significant medical advances have resulted in remarkable success and survival rates for organ recipients. However, the rates of donation have not kept pace with the demand, resulting in a critical shortage of available healthy organs. It has been suggested that the attitudes of medical personnel towards organ retrieval is a key success factor in improving organ donation. Yet there is evidence that those closest to the process of procurement are the most negative.

**Aims and objectives.** This study sought to examine the attitudes towards organ donation of operating room nurses and their experiences of participating in the procurement of organs for transplant, in order to unravel factors that contribute to their attitudes.

**Methods.** This study relied upon in-depth qualitative interviews with 14 operating room nurses who participated in organ procurement in a large urban trauma centre.

**Results.** The results of this study suggest that the process of organ procurement is highly stressful and raises many concerns for operating room nurses. Factors, which added to participants' distress, include organizational factors such as strained relationships within surgical teams, concerns about the dignity of the patient and the well-being of the family and exposure to death and trauma.

**Conclusions.** Experiences of nurses participating in surgical removal of organs for transplantation resulted in personal feelings of distress and negative attitudes to the issue of organ donation which may be transmitted to others and undermine organ procurement efforts.

**Relevance to clinical practice.** The concerns of these vital members of the organ procurement team should be heeded and actions taken to reduce their distress and improve their attitudes towards donation.

**Key words:** health care professionals, operating room nurses, vicarious trauma, secondary trauma, organ donation

## Introduction

The procurement of organs for transplantation has emerged as a pressing health care issue. In Ontario Canada alone, there were 111 cadaveric donations between January and November of 2002. At the same time, 1,745 people were on the waiting list for donations (Gift of Life, 2002). The need to improve procedures for identifying potential donors and approaching families of those at the end of life for the purposes of procurement of organs is frequently identified in the literature (Soukup, 1991; Siminoff, 1997; Sque *et al.*, 2000). Strategies suggested have primarily focussed on the need to increase the knowledge of health care professionals in this area based on the belief that increased knowledge will lead to higher levels of procurement (Soukup, 1991; Taylor *et al.*, 1997; Sque *et al.*, 2000). Yet there is increasing evidence that knowledge alone does not influence the willingness of health care professionals to engage in organ procurement and that attitudes may in fact play a more important role (Gaber *et al.*, 1990; Vrtis & Nicely, 1993). This is a particular area of concern considering the findings of several researchers that the attitudes of health care professionals, as evidenced by their expressed willingness to donate their own or a family members' organs, are markedly less-favourable than those of the general public (Falvo, 1987; Gaber *et al.*, 1990; Roels *et al.*, 1997; Schutt & Henne-Bruns, 1997; Persson *et al.*, 1998). Studies have revealed that nurses are more positive about donation when they are less involved with the surgical process of organ donation or retrieval (Cantwell & Clifford, 2000). For instance, intensive care unit (ICU) nurses have been found to be significantly more positive regarding organ donation than operating room (OR) nurses (Kilberd & Kilberd, 1992) and nurses who did not work in a transplant hospital reported higher willingness to be involved in organ procurement than among nurses who did (Adams *et al.*, 1993).

Investigations regarding negative attitudes towards organ donation among health care professionals have revealed concerns. Hong Kong nurses stated that reasons for not donating included concern over the sanctity of the body and fears that doctors would be more reluctant to save their lives if they had agreed to be organ donors (Yuet-mui *et al.*, 1997). Similarly, in a sample of 456 nursing students, refusal to

donate was significantly associated with the belief that giving consent to donate organs is the same as giving a doctor permission to hasten death (Garde & Corbett, 1994). In addition, concerns about donation are often related to beliefs about reincarnation or other religious attitudes or to a sense that the organs in some ways contain the essence of the individual (Sanner, 2001).

These concerns among those persons most closely associated with the process of organ donation raise questions about the experiences of nurses and doctors who work with the critically ill and who are in the position of procuring organs. Several studies have identified the strain experienced by nurses working with patients who die suddenly from traumatic injury or acute illness and the challenges of working with their families (Kirchhoff & Beckstrand, 2000; Kirchhoff *et al.*, 2000; Ravenscroft & Bell, 2000; Fins & Solomon, 2001). Other researchers considering the reluctance of nursing and medical staff to address issues of death and organ procurement with family members suggest that physicians may experience a patient's death as a personal failure that they are reluctant to share with others (Glazer, 2000). Similarly, the discomfort of nurses in discussing end of life issues with families and in supporting people during their anticipated bereavement, has been attributed to training that focuses on problem-solving and consequently results in feelings of helplessness when someone will die (McKissock & McKissock, 1996). In addition, it has been suggested that nurses procuring organs sometimes have a concern that they are violating their ethical responsibility of beneficence, that they will not harm their patients (Siminoff, 1997).

This research seeks to enhance understanding about the experiences of nurses working most directly with the procurement of organs, that is, operating room nurses who participate in the surgical removal of organs and tissues for donation. In doing so, we attempt to unravel factors associated with this work that contribute to attitudes regarding donation and determine means for improving their experiences and attitudes. Thus the research questions are as follows:

- 1 What are the experiences of operating room nurses who participate in the surgical removal of organs for donation?
- 2 What is the influence of organ retrieval experiences on the attitudes towards donation of operating room nurses?

## Method

The research was conducted with operating room nurses in a large urban trauma centre in Toronto, Canada. The centre serves a densely populated and diverse catchment area, and is a major tertiary and quaternary referral centre for patients from across the province. Ethical approval for the study was provided by the Research Ethics Board of this university affiliated teaching hospital. Purposive sampling was used to obtain the 14 nurses included in this qualitative inquiry. Names of individuals who had been involved in organ procurement procedures were obtained through contacts within the hospital. These individuals were then approached to determine their willingness to participate in this inquiry. The sample size is consistent with that recommended for the long-interview method of data collection in order to ensure that saturation had occurred (McCracken, 1988; Cresswell, 1998). All participants were registered nurses and were women. Their nursing experience ranged from 3.5 years to >25 years, with a mean of 16.3 years. Experience of working in the operating room ranged from 2 to 20 years, with a mean of 11.3 years. The number of cadaveric organ retrieval procedures by each nurse ranged from 2 to >20 years, with a mean of 7.8 years.

Interviews followed a semi-structured interview guide, which included questions about number of years in nursing, level of training and specific training and nursing experience regarding organ procurement. Other questions addressed thoughts and feelings about their involvement with organ donation procedures such as 'Can you describe your thoughts and feelings when you find out you will be assisting with a donor operation?' and 'Can you describe how you feel about postmortem care of the donor body?' Finally, questions addressed general thoughts about participants' willingness to donate organs as a result of their experiences for example 'Has your experience with the organ retrieval process influenced your personal commitment to organ donation?' and 'Would you donate the organs of a family member?' The interviews were audio taped to ensure accuracy of data and transcribed. Data were analysed for themes with the aid of a computer program [Nvivo; Qualitative Solutions & Research (QSR), Australia]. In the initial stage, open coding allowed for the development of broad categories, after which selective coding allowed the researchers to attempt to develop a meaningful narrative of the experience of the nurses.

The interview guide was developed by one of the researchers on the basis of her extensive experience working in the area of organ procurement. This enhanced the credibility of research findings through prolonged engagement with the issue. Dependability or reliability was enhanced through the process

of one researcher who developed the coding tree and conducted open coding. A second investigator then reviewed the coding tree and open coding structure and completed the selective and axial coding. The final analysis was reviewed and commented upon by the remaining two researchers. Transferability was enhanced by comparing the results of this qualitative study with quantitative data on nurses' reactions to organ donation. These measures helped to ensure the trustworthiness of data (Erlandson *et al.*, 1993; Cresswell, 1998).

## Results

In general, nurses in this study described the experience of working with organ donors in the operating room to be a highly stressful and disturbing experience. Factors involved included concern for the donor and concern for the family of the donor. This concern was compounded by a fast paced and a long surgical procedure that continues for several hours with few opportunities for breaks and leaves nurses physically and emotionally drained. It was suggested that new staff in particular find doing organ retrieval work to be highly stressful and many elect not to participate again after their first experience. One respondent summed up the experience of finding out that she would assist in an organ donation procedure as follows:

It's almost like a sinking feeling. I get very saddened... I think about the family or whoever gave permission. It's a wonderful thing. I've a lot of respect for it... but when I see the cases that I've done of relatively young people, there's a bit of emotion there... the surgeons all appear, the science comes in... It's a long procedure. If you take multiple organs, you're there all day, so it can be rough. Especially the bones I find. That can be the worst part, because they're really just empty afterwards.

### The organ procurement procedure

The process of the procedure is described as highly taxing for the nurses. Respondents indicated that the organ procurement surgeries frequently happened at night when there was fewer nursing staff available. Therefore there is limited opportunity for relief or for discussing their feelings about the procedure with others. The procedures usually occur in a rushed and dramatic manner, which the nurses often felt was unnecessary, particularly in the procurement of bones. On the contrary it was suggested that the atmosphere at times appeared 'too light for the task at hand'. One participant summed up the experience stating, 'The aura is bad, just bad... I really don't like to do it... The atmosphere is too noisy, it's too slap happy.' Nurses stated that the procedures

are long and they are exhausted by the end. 'When I go home after a night like that, I'm drained, physically and mentally.'

### The transplant team

Nurses in this study identified that some of the most difficult aspects of organ procurement surgery involved the surgical teams, which arrive to remove the organs. The transplant teams frequently were unknown to the nursing staff as they came from the transplant hospitals, rather than the trauma centres. At times this resulted in technical problems, such as having different names for instruments or using different instruments. More often this resulted in a sense of alienation of OR nurses who felt that visiting surgeons or in particular their assistants, treated the OR nurses disrespectfully. Nurses described incidents where visiting teams threw instruments at them and sexually harassed the OR nurses.

Another concern was the multiple teams 'converging' on one patient. One participant described working with 16 surgeons from different hospitals each of whom was 'trying to get their piece of the action'. Another stated, '[Donation is] just a beautiful thing and these guys come in here like they are going to store.'

There's a lot of tension I find with so many doctors or surgeons being involved at the same time. They're bumping elbows and I sense a bit of aggression there. That's what I don't like. I am just trying to calm the storm. They all want to do everything at once, and it is impossible.

Other respondents however had high praise for visiting surgeons. Surgeons from some hospitals were described as respectful and caring. They used a 'mellow' tone of voice, and treated the donor as a person that needed to be cared for. Some respondents felt that the behaviour of the transplant teams and the atmosphere of the OR during transplant had improved over the past years with the advent of the organ retrieval team and the assistance to the OR staff of an in-hospital organ donation coordinator. Others felt the situation had deteriorated as the pressure for organs had increased.

### Concerns for the donor

One disquieting issue for nurses in this study was lack of confidence that the patient was actually dead. Nurses reported patients reacting when moved and questioning why patients 'required pain medication' if they were in fact dead. When this occurs, nurses ask themselves:

Are we really doing the right thing, could this person have survived?... I mean everything has been checked out, but sometimes they're not, so you get a little queasy.

One nurse reported that, at the end of the procedure, she would think to herself that the person was really dead now and hopefully they had not killed him. Another asked 'are we doing the killing or not?' Nurses indicated that they felt there was a 'grey zone' regarding brain death and they questioned what the anaesthetists were injecting into the patient. These concerns are mirrored in other research, which indicates that nurses would personally refuse organ donation because they felt that it could hasten death (Garde & Corbett, 1994; Yuet-mui *et al.*, 1997).

A major area of concern for participants in this study was the lack of respect with which donors are treated. 'I keep thinking, here is a person who is giving life to dear knows how many people, and we are not treating him with a lot of dignity at this point in time.' A nurse described experiences of retrieving organs from a patient, after being a member of the surgical team that had worked to save his life just a few days earlier. 'But it's somebody's death and like any other death, it's kind of hard to look at somebody you've nursed before... and we end up taking their organs out.' One respondent indicated that she had become angry with surgical staff and demanded that the person still be treated like a patient. She indicated that this seemed to help to some degree and believed that this was because staff realized that it was the OR nurses who would refer future donors.

One point of concern for the donor that arises is at the time that the anaesthetist finally turns off respiratory support equipment. At this point nurses describe grieving the death. '[I feel] sad, very sad... I found the first experience very traumatic for me, but as I did more, I set my mind and said, okay, we're here to save a life and we're here to do a job... But before I go to sleep, I am thinking of the patient most of the time.'

### After the organ donor procurement

'We start off with a person more or less, and now it is empty to me... We wash the body... it's awful. I feel so sorry. It's sad.'

Nurses described a great deal of reverence that they felt towards the body once all the procedures had been completed. Several nurses described a process of saying 'a prayer of thanks' to the deceased person. '[We] say thank you for having given, hopefully this will come to a good end and they haven't ransacked you for nothing.' One nurse described how she felt the body should have someone with them when the procedure was finished. Another discussed the concern that she had for the individual 'he or she is still a patient until the zipper goes up or the transport people come to pick up the

body.’ Several noted that they appreciated the support offered by the morgue assistant.

### Concerns for the family of the donor

Nurses working in organ procurement are also aware of the needs of families of donors waiting for the procedure to be over. Family members indeed have been reported to experience concerns wondering whether the organs or tissue were put to good use (Soukup, 1991). In addition, family members have reported feeling distress over the changes to the body as a result of donation. For instance being acutely aware at the funeral that bones had been replaced by rods or that eyes had been removed (Soukup, 1991). Nurses report going to considerable effort to clean the body and make it more presentable in the event that family wish to see their loved one in the morgue:

‘You take more time, because you don’t want the family to think we have done something hideous.’

When procedures are being performed, nurses often wonder if the family had fully consented. For instance, asked one nurse, did the family realize that the spine was being removed for research?

### Coping

Nurses described how they managed to cope by compartmentalizing tasks to be performed during the procedure and avoiding thinking about the patient as a whole person:

During the procedure I have to sort of split my mind up and say I’m removing the kidneys or the liver or whatever, and looking at what I’m doing rather than looking at the whole picture... Because to me, it’s like, oh my God, why are you doing this?

This strategy of managing the events on a cognitive and technical level while maintaining an emotional distance is similar to that described by ambulance paramedics when dealing with tragic situations (Regehr *et al.*, 2003). Other nurses indicated that they avoid or blunt their feelings. ‘I put [thoughts about death] on the back burner and hope that it never happens.’ ‘After a while you become numb to all that, it is just part of the routine.’

Another cognitive strategy discussed by the nurses in this study was focussing on the positive outcome of saving another life. In addition, the process described of thanking the patient appears to be a coping strategy that attempts to put closure on the death. Several nurses reported getting support from peers as they debriefed the experience. However, it was noted that even after these chats, they tended to take the experience home with them.

### Attitudes towards donation

As a result of their experiences with organ procurement, five respondents indicated that they would not consent to donation of themselves or family. This in large part stemmed from the fact that they felt that the donor was treated with little respect or dignity. ‘You’re not doing that to me or any of my relatives in such a manner.’ In addition, nurses noted that frequently the organs were not used or not even picked up:

I feel for the patient because everything is gone and [even though] I’m in the medical field, I don’t see myself being able to consent to something like this. Because of what I see. And for how traumatic it would be for the patient’s family to see the patient after this. And I know I shouldn’t feel this way.

Consistent with the literature, one theme related to refusal to donate organs was religious or spiritual beliefs (Sanner, 2001). One respondent for instance stated that somehow she felt she needed her organs in the after life.

Of the nine respondents who indicated that they would give consent, several offered provisos, such as which organs or tissues that they would not consent to give. This was related either to concerns of disfigurement (e.g. the eyes or bones) or concerns that certain organs or tissues were not effectively used.

### Suggestions for change

Several nurses indicated that one thing that would make this process easier for them, would be to have information about where the organs went and whether the transplant was successful. One nurse recalls getting tearful at an in-service regarding patients that had received organs. ‘It makes you feel good to hear that you’ve performed something to make these people better.’ Others suggested letters or electronic updates about the complete process from the attempts to save the patient, to the declaration of death, the organ removal and the final transplant. One respondent indicated that it was helpful to have a friend who worked on a transplant team who informed her of the successes. Another potentially helpful piece of information according to some respondents, is the reaction of family to the death and whether they were in full support of the donation. In addition, general education on success rates in transplants, for instance through electronic links on an available computer system, was suggested.

Nurses indicate that they receive cookies as a thanks for their involvement in organ procurement. Many suggested, however, that they do not approve or appreciate the gesture. One suggested the money would be better spent designing ways to increase the dignity of the patient donor.

The primary suggestions for improvement however is working to improve the relationships between the OR nurses at the donor hospitals and the transplant teams that come to retrieve organs. In part these suggestions focussed on improved courtesy and collegiality between team members. In addition however, nurses noted that continued improvement in the coordination system would be helpful in this regard. One example of an improvement would be clearer information about which team to expect next and how much time to expect among surgical teams. While several nurses' noted considerable improvement in this respect, several suggested that there is still some way to go.

**Discussion**

The results of this study suggest that the process of organ procurement from the standpoint of the operating room nurse is highly stressful and raises many concerns and issues for those participating in the surgical removal of organs. Figure 1 graphically displays the themes arising from this qualitative analysis. The first set of factors identified by the nurses in this study was organizational in nature. One aspect of this related to the procurement procedure, which is lengthy, rushed, and frequently occurs at night when resources are more limited. The second aspect related to interactions with visiting transplant teams several of whom they did not have respectful and collegial relationships. Suggested areas for improvement in this respect included better coordination and information about the schedule of

surgeries on this particular patient. In addition, the need to improve respect within the surgical team was emphasized.

A second set of factors adding to the stress and distress of nurses were related to the nursing 'responsibility for the donor and their family'. Nurses expressed concern about the disfigurement of bodies caused by organ and tissue retrieval and the impact that this would have on family members. They also expressed concerns or fears that the patient may not be dead. This concern is mirrored in the literature. Siminoff (1997) notes that once a person has been declared brain dead, health care professionals, particularly nurses who spend considerable time caring for the brain dead individual, may find the experience deeply disturbing:

Although staff are told that the patients are dead and may do such activities as the filling out of death certificates that signify the patient's death, the donor still appears to be alive, with normal color, a beating heart, and functioning digestion and metabolism. Indeed, treatments continue unabated in the brain dead patient, including resuscitative efforts in the event of cardiac arrest. To the hospital staff, the patient cannot help but be in an ambiguous state he or she is dead but not really dead (Siminoff, 1997, p. 89).

These concerns lead to the third set of factors, which involve the 'exposure to physical trauma and death'. Participants in this study described in graphic detail the experience of handling bodies that had been removed of organs and bones. They also discussed their sense of grief and sadness when the respiratory support equipment was shut off and the person truly appeared to die. There is considerable literature related

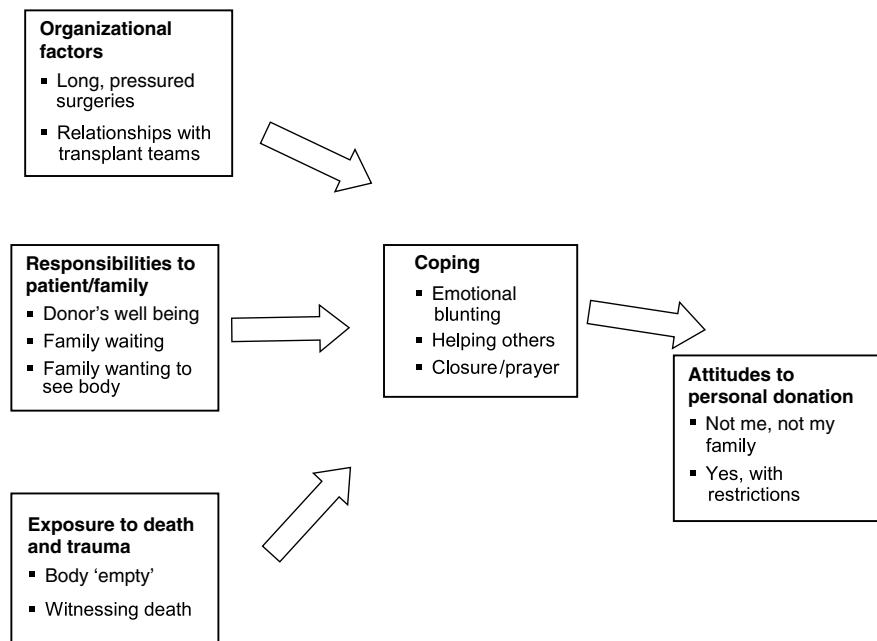


Figure 1 Thematic model of experiences and attitudes toward organ procurement.

to the impact of exposure to death and mutilation on a variety of emergency service workers (Bryant & Harvey, 1996; Marmar *et al.*, 1999; Regehr *et al.*, 2000). The description of emotional reactions related to these experiences in nurses in our study and the fact that they continued to be impacted by these experiences as they returned home is consistent with findings in studies of emergency professionals (Roberts & Levenson, 2001; Pfefferbaum *et al.*, 2002). Further, some nurses in this study reported having been involved in operations aimed at saving the patient in the days preceding the organ retrieval. This previous relationship and connection with the patient increase vulnerability to distressing emotional responses (Regehr *et al.*, 2003).

Coping strategies described by the nurses included such strategies as focusing on the technical aspects of the job and avoiding thoughts about the patient's life and family. This is similar to a strategy described by paramedics (Regehr *et al.*, 2003). In addition, nurses focussed on the life or lives that would be saved as a result of transplant. Finally, nurses described a process by which they sought closure on the life of the donor through a prayer of thanks. Suggestions for improvement in this domain focussed around increased information regarding the success of the transplant and updates on the health and well-being of recipients. This would help nurses in the process of refocusing on positive outcomes of donation and procurement.

In the end, five of 14 nurses participating in the study indicated that they would not be willing to donate their organs or those of family members. This rate of 64% being willing to donate is consistent with that found in other studies of nurses and doctors (Falvo, 1987; Yuet-mui *et al.*, 1997; Persson *et al.*, 1998). Of those willing to donate however, most were clear that they would limit donation to certain organs or tissues.

## Conclusions

This research explores the reactions of operating room nurses who participate in the procurement of organs for transplant. It is clear that the nurses who participated in this qualitative study were profoundly affected by the experience. Factors, which add to their distress, include organizational factors including strained relationships within surgical teams, concerns about the well-being of the patient and their family and exposure to death and trauma. It was reported that their experiences contributed to personal feelings of distress and negative attitudes to the issue of organ donation. These findings have important ramifications. First, the willingness of nursing staff to participate in this vital aspect of health care may be compromised. Secondly, these attitudes of staff are

likely to be transmitted to others, which can potentially reduce the willingness of staff to approach families of potential donors and present donation in a positive light. It is important to heed the suggestions of these key players in the organ procurement process. Possible areas for improvement include increased information about successes related to organ donation, increased information on which procedures will be performed on the donor and at what time, improving the relationship between OR staff at the trauma centre and visiting organ retrieval teams, and increased respect for the donor.

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## Contributions

Study design: MK, AB; data analysis: CR, SP; manuscript preparation: CR; literature review: CR, SP.

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