CONVERTING POTENTIAL ORGAN DONORS: A
SITUATIONAL ANALYSIS OF AUSTRALIAN PHYSICIANS

by

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Doctor of Psychology (Health)

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September, 2010
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Abstract

Converting potential organ donors into actual donors is a complex process, orchestrated by highly specialised physicians. The process is dependent on a physician’s motivation and confidence, yet theory and current research do not effectively explain this. Following a Constructionist Grounded Theory and Situational Analysis approach, 15 Intensive Care Unit and Emergency Department physicians were interviewed across six major metropolitan hospitals in Victoria and New South Wales, Australia. Differences in the interpretation and practice of the patient best interests standard were found to affect physicians’ motivation and confidence to convert potential donors. Measures taken to avoid a conflict of interest can be divided according to three secondary categories observed in the data: prioritising operational responsibilities; determining ethics; and seeking legal clarity and consistency. A physician’s role in organ donation requires significant personal effort but it was revealed this effort is deemed warranted only if organ donation becomes the treating family’s priority. Interviewees resisted pressure to re-order organ donation amongst their own role priorities as they believed it may either challenge their duty-of-care, or potentially expose them to misinterpretation by colleagues, patients’ families, and the media. There was ongoing unease regarding the ethics of Donation after Cardiac Death and uncertainty about the operational and legal aspects of Donation after Brain Death. Furthermore, Australia’s consent registers were not highly regarded by the physicians. Overall, interviewees revealed strong support for organ donation but would not consider it part of end of life care, representing a major obstacle to the support of more potential donor opportunities. It is suggested that inconsistencies
in opinion, policy, and practice, as well as the perceived deficit of more specific
public consent information, may negatively impact the motivation, confidence,
and ultimate behaviours of physicians and the families they are treating. This
theory-building research indicates that the key to unlocking Australia’s potential
donor pool is to ethically and legally broaden the patient best interests standard by
making registered consents more meaningful. It offers a unique and raw insight in
to the “gatekeepers” experience, a perspective not normally available to those
outside the field, nor in such detail to those within it.
Chapter One: Organ Donation in Australia

1.1. Introduction and Thesis Overview

On both clinical and economic grounds, organ transplantation has become the treatment of choice, if not of last resort, for many very serious medical conditions. Transplantable organs include the kidneys, heart, lungs, liver, and pancreas, while transplantable tissues include the heart valves, bone tissue, skin tissue, corneas, and bone marrow. In addition to overcoming diseases of these organs and tissues, transplantation can treat life threatening illnesses such as diabetes, cystic fibrosis, blindness, and leukemia. As is the case across the developed world, Australia’s most concerning transplantation issue is our shortage of donors.

Empirical research indicates that while Australia’s organ donation rate is comparable to some countries in the western world, it is significantly lower than many others. This is despite various attempts to increase the rate using public awareness campaigns, changes to the donor legislation, and to the donor recruitment process. This paper will argue that despite these efforts, there remains a significant disparity between our potential and actual donation rate. The barriers that currently limit organ donation in Australia will be outlined, as well as the pathways that may be more effective at increasing rates. It will be argued that the most effective pathway is to examine the experience of gatekeepers of the donation process, who are the physicians of intensive care units (ICU). These physicians, who specialise in the care of critically ill patients, are dually referred to as intensivists throughout the paper due the common usage of this term in Australian healthcare settings. It will be shown that these intensivists have a unique capacity to directly impact donation rates. This is because it is their
responsibility to determine potential organ donation opportunities, as well as when and how to convert these patients into actual organ donors.

Through an examination of the empirical literature, the main factors influencing health professionals’ involvement in organ donation will be discussed in Chapter Two. These factors include the attitudes, actions, knowledge, communication styles, fears, and experiences of physicians, nurses, and medical students worldwide, as well as the limitations and practicalities of the hospital unit that must be considered in any evaluation of the donation process. It will be argued that both the research and theories proposed to date do not effectively explain a physician’s behaviour in the organ donor conversion process and the need for qualitative, theory-building research is outlined. In response to these deficits, an empirical research design is described in Chapter Three that is aimed at better comprehending what factors are associated with physician facilitation of donor conversion.

Chapters Four, Five, and Six will present and discuss the analysis of this unique Australian research paradigm. It will be collectively demonstrated that physicians use the patient best interests standard to guide their ultimate conversion behaviour, yet inconsistency and ambiguity in the interpretation, policy, and practice of this ethical pedestal are negatively affecting physician motivation and confidence levels. To elucidate these differences, the three results chapters have been divided according to the three secondary categories that broadly figure in a physician’s bid to minimise posing a conflict of interest:
prioritising operational responsibilities; determining ethics; and seeking legal clarity and consistency.

Chapter Seven, the final chapter, is a synthesis of current findings in relation to the previous research and theoretical offerings. It also introduces what has been lacking—a substantive model to comprehensively explain intensivists’ motivation and confidence to convert potential organ donors. As well as providing a platform for larger studies, it is hoped this research will facilitate a re-evaluation of current donation procedures by offering a conceptual framework upon which national policy makers and hospital administrators could structure nationally consistent policy development. Furthermore, health professional and public education recommendations are provided to assist policy makers more effectively influence behavior, and help reap the medical, economic, and social benefits that even the smallest increase in our organ donation rate would bestow.

1.2. The Historical Importance of Organ Donation

Australia’s first successful transplant operation (pancreatic) took place at Westmead Hospital in 1911. Corneal transplants were recorded in Australia in 1941, followed by kidney attempts in 1956 (first successful in 1965), heart and liver transplants in 1968, heart/lung combined in 1986 and single lung in 1990 (Queenslanders Donate, 2007). Approximately 30,000 Australians have received life-saving transplants over the past 40 years (LIFEGift, 2007a). Much of this figure is only made possible because up to ten people can potentially benefit from a sole donor using organs including the kidneys, heart, lungs, liver and pancreas; or from tissues including heart valves, bone tissue, skin tissue, corneas and bone marrow. In addition to overcoming diseases of these organs and tissues,
transplantation has overcome life threatening and debilitating illnesses such as diabetes, cystic fibrosis, blindness, leukemia, and many others (Australia and New Zealand Organ Donation Registry [ANZOD], 2007). As shown in Table 1, Australia is highly successful in the practice of transplantation. Our one-year survival rates for most organ transplants are above 80 per cent (Healey, 2003).

Table 1.1

*Transplant Success Rates in Australia.*

<table>
<thead>
<tr>
<th>Type of transplant</th>
<th>One year survival rate</th>
<th>Five year survival rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pancreatic</td>
<td>94 %</td>
<td>87 %</td>
</tr>
<tr>
<td>Heart</td>
<td>90 %,</td>
<td>85 %</td>
</tr>
<tr>
<td>Lung</td>
<td>89 %</td>
<td>75 %</td>
</tr>
<tr>
<td>Liver</td>
<td>90 %</td>
<td>85 %</td>
</tr>
<tr>
<td>Heart-lung</td>
<td>76 %</td>
<td>60 %</td>
</tr>
</tbody>
</table>

*Note:* Data sourced from *Organ transplantation,* by J. Healey, 2003, Rozelle, NSW: Spinney Press.

Transplantation is also cost effective: for example, a single kidney transplant costs $18,000AU in the first year and there is only the cost of medication thereafter (LIFEGift, 2007b). Another important consideration is that the recipient is typically able to return to the work force. By comparison, kidney dialysis costs the community between $30,000 and $50,000 per year, per patient (LIFEGift, 2007b). Dialysis is very time-consuming as it requires the patient to be treated for several hours on several days of each week, which virtually precludes them from
full time employment and increases their dependency on welfare payments and other tax-payer resources.

1.3. Rate of Donation in Australia

Despite such impressive success in the field of transplantation, Australia’s donation rate is one of the lowest in the developed world at approximately 11 donors per million population (DPMP) (van Gelder, Manyalich, Costa, & Paez, 2010). This is higher than our New Zealand neighbours (10 DPMP) but much lower than Spain’s rate of 34 DPMP (van Gelder et al., 2010). Portugal, Austria, Estonia, USA, Italy, Norway, and the Czech Republic are the next highest donating countries with rates ranging from 31 to 19 DPMP respectively (ANZOD, 2010; van Gelder et al., 2010). In fact, most OECD countries have at least a 50 per cent higher rate than Australia’s, some as much as 100 - 200 per cent higher (ANZOD, 2007).

In August 2010, there were nearly 1,700 Australians on the waiting list for a donor organ (ANZOD, 2010). This figure has been reasonably stable since the year 2000 but exponentially greater than the number of organs available. For instance, in 2009 there were only 247 Australian donors resulting in an overall total of 850 transplants (ANZOD, 2010). Last year, donation of more than one organ occurred in 80 per cent of donors, where the average number of organs transplanted per donor was 3.4 (ANZOD, 2010). This was not a great improvement from the respective average of 3.7 of organs donated by Australian donors in 2007 (ANZOD, 2007). If enough organs and tissues were available, up to 75,000 Australians could benefit from a transplant (Pfizer Australia, 2004) but
an average of two Australians will die every week while waiting for a donation (Healey, 2003). Given that the average waiting time for a kidney transplant has extended to four years in most states (Mathew, Faull, & Snelling, 2005), it would not be unexpected to find a further 20 per cent of those waiting will be removed from the list because their condition deteriorates and transplantation is no longer a viable option (ANZOD, 2007).

In addition to assisting the recipient, organ donation can be of some assistance to grieving families, in that it makes some sense out of an otherwise seemingly senseless death (Pelletier-Hibbert, 1998). According to some survey results, as many as 94 per cent of the Australian public support donation but only 30 per cent of those surveyed had registered their intentions or informed family members (Australians Donate, 2006). This was a significant finding because Australia, like the United Kingdom, USA, Germany, and New Zealand, currently practices the “Opt-In” or “Informed Consent” legislation, which means individuals wishing to donate must make their intentions known by actively consenting on national registrars, in addition to discussing their wishes with their family. This framework ultimately relies on the deceased’s family members to make the final decision to donate on their behalf regardless of whether the deceased’s wishes are known to the family. Thus, the family can overrule the deceased’s wishes if they choose to do so. However, since 2006 there have been no recorded family refusals for potential donors who had registered their consent to donate on the Australian Organ Donation Registry (AODR) (ANZOD, 2010). Under the Australian Human Tissue Act 1982 consent for organ donation can, therefore, occur via the donor,
the family, or with permission of the coroner (if required). Payments to the donor or donor family are illegal in Australia under the Act.

Alternatively, the “Opt-Out” or “Presumed Consent” donation system is based on the assumption that every person is deemed to give their consent, unless they have actively chosen to opt-out by formally recording their unwillingness to donate organs. The Opt-Out system and its variants are currently practiced in Singapore, Belgium, Italy, France, Spain, and many other European Union (EU) countries. Depending on the strictness of the legislation, however, it seems there is little difference between the two systems regarding actual donation rates. This is presumably because many opt-out systems also mandate family consent (LIFEGift, 2007c).

1.4. Australia’s Potential Donation Rate

A potential donor was once defined as a patient with acute irreversible brain damage that resulted in brain death (Hibberd et al., 1992). Brain death is the term for death determined by the irreversible loss of all function of the brain. It must be distinguished from severely brain damaged states such as permanent or persistent coma or unconsciousness, post-coma unresponsiveness (vegetative state), or minimally conscious state (National Health and Medical Research Committee [NHMRC], 2007). When trying to estimate the total number of potential donors (via DBD and/or DCD) available to a specific country or region, critics of the DPMP method have argued that it fails to account for many influences. These include regional variations in health status, number and availability of ICU beds, mortality patterns (especially from intracerebral bleeding and road traffic
accidents), neurosurgical practice, and demographics (Barber, Falvey, Hamilton, Collett, & Rudge, 2006; Sheehy et al., 2003).

A country’s unrealised or potential donor rate can, therefore, be alternatively estimated via “a percentage of a potential” or the “conversion rate”, which is defined as the number of actual donors divided by the number of potential donors (Sheehy et al., 2003, p. 668). The potential number of donors figure is typically found via a national audit of all deaths occurring in intensive care units which met the criteria for death with no absolute contraindications to organ donation (no cancerous malignancies or HIV, for example) as defined by a standardised list of codes from the International Classification of Diseases, Tenth Revision (ICD-10) (WHO, 1990). Although audit conversion methods include a greater number of variables in their calculations, they seem to be more precise in their estimations of a country’s potential donor rates than the DPMP method alone. The design of both research methods limits a study ever going beyond numerically outlining potential into actual donor conversion rates. Therefore, neither method can effectively explore the reasons why some families consent and why some physicians misidentify potential donors, or are unwilling to resuscitate potential donors or to approach the next-of-kin for consent.

Using the audit conversion rate method, Sheehy and colleagues (2003) estimated America’s potential brain dead donor pool during a three-year period to be 18,624, with an overall conversion rate of 42 per cent (that is, 7,790 of 18,524 became actual donors). In the United Kingdom (UK), an ongoing national audit indicated a conversion rate of just 45 per cent for brain dead donors in a two-year
period between 2003 and 2005 (Barber et al., 2006). This translates the UK’s maximum donor potential rate to be 23.2 DPMP, which is almost double the actual rate of 12.3 DPMP recorded in 2004 but still well below the actual rate achieved in Spain for the same year (Barber et al., 2006). A Czech Republic study reported a maximum potential brain dead pool of 55.7 DPMP, with a more conservative estimate of 37.4 DPMP. Either rate would be a significant improvement to the country’s actual rate of 18.1 DPMP (Pokorná, Vitko, & Ekberg, 2003).

To my knowledge, there is yet to be a national audit conducted in Australia to allow such conversion comparisons to take place. A recent approximation from a sample of 22 Australian hospitals suggests that on average, there is a 60 per cent conversion rate of patients with confirmed brain damage (NHMRC, 2009b). However, a state death audit also conducted across all units in 12 Victorian hospitals estimated the maximum potential rate of brain dead organ donation to be as high as 15-17 DPMP, which was almost double Victoria’s then rate of 9 DPMP (Opdam & Silvester, 2006). This maximum potential rate is still lower than the actual rates achieved in some countries, which Opdam and Silvester believe may be explained by our lower road and firearm trauma, and differences in treatment of hypertension and severe brain injury.

Nonetheless, this estimate was a significant increase from a New South Wales (NSW) state audit conducted nearly two decades ago which revealed a missed brain dead donor rate of approximately 9 DPMP, where the definition of a missed or unidentified referral was a medically realistic donor who failed to become an
actual donor because of lack of medical intervention (Hibberd et al., 1992). In NSW alone, it was found that the actual donation rate could be improved by as much as 70-80 per cent. A strength of this study was its accounting not only for deaths occurring in the ICU but all hospital deaths, particularly other departments where brain death may occur, such as neurology, coronary care, and emergency departments (Hibberd et al., 1992). However, this liberal inclusion of all brain death patients as well as probable cases makes it difficult to directly compare to overseas studies, where audits tend to be restricted to ICU deaths. Nevertheless, the Hibberd and colleagues’ more extensive outcome measures add significant value to Australian organ donor research by isolating the potential donation rate and offering a few solutions to increase it.

The reemergence of Donation after Cardiac Death (DCD) meant there was a new potential donor type and that, therefore, the potential donor pool could widen significantly. Donation after Cardiac Death offers access to the previously inaccessible potential donor who does not meet the definition of brain death but whose injuries or prognosis is so dire that death is imminent. Consistent with international legislation, to be considered a potential DCD donor in Australia a patient must be able to be declared dead by irreversible cessation of circulation of blood (Australian Law Reform Commission [ALRC], 1977), be haemodynamically supported in an intensive care unit or emergency department, and must meet the general medical criteria for organ and tissue donation in Australia (DonateLife, 2010c). Also consistent with Canada, UK and USA protocol is our national use of the Maastricht system to classify potential DCD donor types (Kootstra, Daemon, & Oomen, 1995), with Australian guidelines
specifying only Maastricht Category Three, or more rarely, Category Four patients as realistic potential donors (NHMRC, 2009a). Category Three scenarios are *controlled* and represent patients awaiting cardiac death after planned treatment withdrawal, with a known and limited warm ischaemic time. Maastricht Category Four is *uncontrolled* because cardiac arrest has occurred after the confirmation of brain death but before planned organ procurement, again with a known and limited warm ischaemic time.

Last year in Australia there were 42 donors after cardiac death, making up nearly 2 DPMP of our total of 11 DPMP and a significant increase from the eight DCD donors recorded in 2006 (ANZOD 2007, 2010). Our current total number of DCD donors is similar to those recorded in New Zealand and Spain, the world’s leading donator (ANZOD, 2010; van Gelder et al., 2010). International DCD statistics indicate just how variable the worldwide uptake of DCD programs currently is. Despite being amongst the world’s highest deceased donation countries, there were no donors after cardiac death recorded in Estonia and the Czech Republic. Over a five year period, DCD leaders, the Netherlands, recorded an overall 129 per cent increase in DCD, compared to 21 per cent decrease in DBD for the same period (Cohen et al., 2005). American audits have revealed the number of organs retrieved from DCD donors rose from 64 organs in 1995 to 391 in 2004 (Marks et al., 2006) but the number of DCD donors reduced by 46 per cent in 2005 compared to 2004 (Mandell et al., 2006).

Research on the potential donor pool offered by DCD patients is limited both here and overseas, plus the data is difficult to compare due to differences in DCD
donor eligibility criteria. Bearing this in mind, however, one retrospective Australian audit found that in the state of NSW alone, seven per cent of deceased ICU patients would have met the DCD criteria (Bhonagiri & Wills, 2005). DCD in America has been estimated to increase donors by 1500 per year, which would represent a significant increase from the actual donation rate of 793 DCD donors recorded in 2007 (DeVita et al., 2008; DeVita, Vukmir, Snyder & Graziano, 1995). Other US research suggests DCD has the potential to increase kidney organ donations alone by 2.5–4 times (Hoogland, Snoeijs, & van Heurn, 2010). One American institution has estimated that at least five per cent of its pediatric donors could come via DCD (Durall, Laussen, & Randolph, 2007). Although the donor type (DCD or DBD) was not specified, a comprehensive audit of all ICUs and two neurosurgical ICUs in four Danish hospitals (which service 30 per cent of the Danish population), estimated the potential donor pool could rise from 13.1 DPMP to a staggering 51 DPMP (Madsen & Bøgh, 2005).

1.5. Summary

Organ donation is a medical, economic, and socially critical issue. Despite this, donation rates continue to plateau at suboptimal levels, well below what they could be. Through the research described above, it is evident that the worldwide crisis in organ shortage may not be due to a lack of potential donors but rather a failure to convert many potential into actual donors (Matesanz, 2004). Better strategies are needed to capture more of the potential donor pool and thereby increase donation rates. Chapter two will explore the main factors identified by the empirical literature that have been found to contribute to the consistent disparity between potential and actual donation rates.
Chapter Two: Barriers and Opportunities to Increase Organ Donation in Australia

2.1 Introduction

Strategies to address the worldwide shortage of organ donors have included heavily marketed public education campaigns, introducing donor intent cards and driver licenses and mandated choice legislation but most efforts have been unable to sustain the initial improvements (Oz et al., 2003). Australian strategies have been similar in their approach to the donor shortage but again with limited impact. This can be evidenced by our low donation rate and the fact that fewer than 1.5 million of our 22 million population have registered their “legally valid consent or objection” to organ/tissue donation on the national register (Australian Bureau of Statistics, 2010; Australian Government, 2010a). This is despite opinion polls demonstrating that Australians’ support for donation is rising and was recently as high as 94 per cent (Australians Donate, 2006). So where are these potential donors being lost? As identified in chapter one, potential donors appear to get lost somewhere within the hospital setting, probably because it is here that the sensitive human interplay between the deceased, their family, and the medical professional occurs.

Physicians, in particular, have been identified as the most crucial link in the organ donation process because they ultimately determine if organ donation is suitable and, if so, when and how they will approach the bereaved relatives about donation. Together with the nursing staff, a physician’s influence is substantial given they are amongst the first individuals to establish rapport and raise the prospect of organ donation with the potential donor family (Cohen, Ami,
Ashkenazi, & Singer, 2008; Goz, Goz, & Erkan, 2006; Simpkin, Robertson, Barber, & Young, 2009; Oliver, Sturtevant, Scheetz, & Fallat, 2001; Williams et al., 2003). A vast amount of quantitative, and some qualitative, research has therefore surveyed the attitudes, actions and knowledge of physicians, nurses and medical students worldwide, with the aim of pinpointing which factors are limiting donor conversion. Presented below is a summary of this empirical literature, which has been organised according to the main factors found to influence health professionals’ involvement in the practice of organ donor conversion. All results should be interpreted with caution due to the possibility of response bias, given most studies report response rates somewhere between 40 and 65 per cent.
2.2 Model of the Organ Donation Process

Demonstrated in Figure 2.1 is the complexity of the organ donation process, the influence of organisational factors and the physician’s involvement at almost every step.

![Figure 2.1: The process of organ donation and transplantation](image)

*Org. Proc = organizational process*


This macro model illustrates that successful organ donation is clearly a team-dependant process. Each component of this process signifies a fragile junction where a potential donor can be lost. Effective and appropriate communication between attending medical and nursing staff, their unit and hospital administrators, and the potential donor family, is vital. So too is the availability of clinical resources that are fundamental to carrying out the many components of the model reliant on technical input, such as brain death confirmation, donor management, and organ/tissue removal. Yet, the most outstanding feature of the
model is that the entire organ donation process relies on a single component to initiate it all, so unless potential donors are identified, there will only ever be limited scope to improve donation rates. This realisation is further discussed in section 2.3.2.

2.3 Factors Influencing Health Professionals’ Practice of Organ Donation

2.3.1 Attitudes Toward Organ Donation and Transplantation

According to an Australian survey of ICU staff who were mostly nurses, 92 per cent were supportive of the general practice of organ donation (Australians Donate, 2007). Relatively high pro-donation figures have also been reported amongst overseas healthcare settings, varying from: 96 per cent of doctors to 84 per cent of nurses in the UK; 95 per cent of doctors and 81 per cent of nurses in Denmark; 96 per cent of doctors and 86 per cent of nurses in Italy; over 90 per cent of nurses and neurosurgeons working in the USA; and 74 per cent of doctors and nurses in India (Bøgh & Madsen, 2005; Ingram, Buckner, & Rayburn, 2002; Minz et al., 1998; Prottas & Batten, 1988; Pugliese et al., 2001; Wakeford & Stepney, 1989). Despite being the world leaders in cadaveric donation, generally no more than 70 per cent of most Spanish hospital based employee surveys (doctors, nurses, healthcare assistants, and ancillary personnel) were supportive of the cadaveric donation concept (Ríos et al., 2005).

Although over 90 per cent of an American sample of nurses and neurosurgeons would consider donating their own organs or relatives’ organs (Prottas & Batten, 1988), this is one of few studies to find consistency between health professionals’ general attitudes to donation and their personal willingness
to donate. Like the public, there is generally a decrease of support amongst health professionals when the research question involves donating their own, or loved ones organs (Bøgh & Madsen, 2005; Gross et al., 2000; Pugliese et al., 2001). International surveys conducted in Canada, India and Korea, respectively found that only 64, 59 and 43 per cent of health professionals were personally willing to donate their own or relatives’ organs, (Kim, Fisher, & Elliot, 2006; Minz et al., 1998; Regehr, Kjerulf, Popova, & Baker, 2004), which is substantially less support than that shown for the general practice of organ donation. If the donor is a child, one’s willingness to donate is even smaller, as demonstrated in Australia, where 80 per cent of a large ICU sample would donate their own or loved ones organs but only 32 per cent would donate their child’s organs (Australians Donate, 2007).

Of these surveys, the percentage of health professionals who specifically refused to donate their own organs was as low as 7 per cent in Switzerland, nearly 9 per cent in the UK (nurse-only sample), 11 per cent in Northern Denmark, 42 per cent in Korea (nurse-only sample); and 32 per cent in Spain (Bøgh & Madsen, 2005; Gross et al., 2000; Ingram et al., 2002; Kim et al., 2006; Ríos et al., 2005). Again, this last result was a surprising finding from the country with the world’s largest cadaveric donation rate; nonetheless, it was replicated some time afterwards (Ríos et al., 2007).

The actual reasoning behind these differences in attitude and willingness has only been briefly examined by some of the literature, yielding mixed and inconsistent support for predictors such as age, sex, marital status, religion,
partners opinion towards donations, previous family discussions about donation, job category, legislation, transplantation infrastructure (Minz et al., 1998; Pugliese et al., 2001; Pratts & Batten, 1988; Ríos et al., 2005, 2006, 2007; Rithalia, McDaid, Suekarran, Myers, & Sowden, 2009; Wakeford & Stepney, 1989). Some investigators firmly conclude that organisational and administrative factors equal medical ethics as the primary differentiators of a physician’s attitude and willingness to donate (Wakeford & Stepney, 1989). This is contrary to others who insist attitudinal differences are heavily psychosocially dependant, arguing that level of education and ethical discomfort are more predictive of health professionals’ attitudes. Because education level is related to job status, and consequently, the amount of direct experience with the donation process, this may be one reason to explain the consistent finding that physicians (who are generally highly educated) are more favourable towards donation than nurses and particularly administration staff. A finding that may also be due to differences in the quality of familial interaction given that nurses tend to have a greater bedside interaction with the family than physicians typically do. Sex and marital status has been a significant predictor in some attitudinal research (Ríos et al., 2006) but not in others (Ríos et al., 2005). Thus, there is an undeniable need for more conclusive enquiry that not only can explain attitude but can go beyond this to explain why often very supportive attitudes towards donation, do not translate to personal willingness.

2.3.1.1 Attitudes of Medical Students

Based on the assumption that the education of health professionals early in their careers may result in better donation rates (Bardell, Hunter, Kent, & Jain,
Converting Organ Donors: A Situational Analysis of Australian Physicians 2003; Garcia et al., 2008), a number of studies have examined medical students’ attitudes as a way to better understand donation patterns. These samples also tend to have better survey response rates compared to practicing professionals.

Collectively, the attitudes towards donation of overseas medical students are as variable as those found in their more experienced, professional counterparts. For instance 99 per cent of a sample of American medical students were willing to donate their own organs, 96 and 32 per cent were willing to donate a kidney to a family member or stranger whilst living (Edwards, Essman, & Thornton, 2007). Sixty-five per cent of Turkish students were willing to personally donate but only six per cent of those willing carried donor cards, 25.5 per cent were unsure, and a further nine per cent specifically stated they would not give consent (Goz et al., 2006). Fifty-nine per cent of Japanese medical students were willing to personally donate after brain or cardiac death, but much fewer (35%) were willing to donate organs from a family member in the same circumstances (Ohwaki et al., 2006). The latter study was one of few to also examine whether participants would accept organs from a brain-dead donor in the event that they required a transplant themselves. Seventy-one per cent of medical students said they would, yet when these same students were asked about their willingness to donate their organs, only 45 per cent said they were willing to do so (Ohwaki et al., 2006). These findings highlight an inconsistency that is also reported in most attitudinal research of practicing physicians.

The most frequently perceived barriers to donation amongst American students was mistrust that organs would be allocated fairly (76%), followed by
lack of sufficient information regarding donation (45%) and a fear of surgery or disfigurement (44%) (Edwards et al., 2007). In Japan, confidence in brain death diagnosis was the important barrier to donation attitudes (Ohwaki et al., 2006). In addition to sex differences found in Turkish medical students, the most common reason for an unwillingness to donate was concern over illegal organ trafficking behaviour (Goz et al., 2006), which is not a typical concern amongst Western cultures, but has also been reported in some parts of Asia (Kim, Elliott, & Hyde, 2004). Another point of comparison that seldom appears in the literature, but was conducted in the Turkish study, was participants’ reasons for their willingness to donate, not merely their reasons for not donating. Amongst pro-donation students, the most common reason to donate was to save someone’s life (Goz et al., 2006).

2.3.2 Health Professionals’ Practice of the Identification, Request and Consent Process

It has been said that the three most important factors appearing to affect donation rates are the rate of hospital identification or referrals, the rate of requests made to families, and the rate of consent by families (Opdam & Silvester, 2006; Sheehy et al., 2003). The first two factors are squarely the responsibility of physicians, but, as demonstrated in the literature, their influence is also both consequential to, and dependent on, the third factor - the consent process (Prottas & Batten, 1988). Some families report increased stress when health professionals fail to identify, approach or discuss the option of organ donation (Pelletier-Hibbert, 1998) and some even remain resentful they were not given the option to donate (Dow, 2006). Worldwide research reveals health professionals’ behaviour towards the practice of organ donation is highly variable, even within an
individual country depending who was surveyed and in which region. The following findings are presented from most to least encouraging and where available, reasons for the actual donor shortfall are described.

One English study found 94 per cent of families of potential donors were approached for permission for organ donation (Gore, Cable, & Holland, 1992). However, the authors concluded that a 20 per cent increase in kidney donations could be achieved if prompter brain death testing occurred in the ICU and if the relatives refusal to consent was only 22 instead of 30 per cent (Gore et al., 1992). More recent UK research suggested that 85 per cent of families of potential donors were asked about donation (Barber et al., 2006), of which, 41 per cent denied consent. Only 32 per cent of families in another UK sample were approached about tissue donation and 59 per cent of the families who were not approached wished that they had been (Carey & Forbes, 2003).

In America, the average referral rate was found to be similar at 80 per cent, with a request rate of 84 per cent and a mean consent rate of 54 per cent (Sheehy et al., 2003). Although no request rate was specifically reported, the identification rate was as high as 78 per cent and the consent rate was 50 per cent in Denmark (Madsen & Bogh, 2005). Unfortunately, like the majority of quantitative studies, the process involved in approaching (or not) families was not reported, nor were the motivators for the families’ refusals. As was the case in an Italian audit that reported brain death, diagnosis was only conducted on 40.8 per cent of patients with severe brain damage (Pugliese et al., 2001). An audit of 79 Parisian ICUs found only 68 of the 120 potential donors were referred to organ procurement
organisations, prompting the investigators to conclude that the rate of brain deaths differs according to the diagnosis and hospital characteristics (Senouci et al., 2004). A rare multi-international study that evaluated 11 hospitals in the Netherlands, Spain, the United Kingdom and Canada reported just 31 per cent of potential donors became actual donors, with the lack of conversion due to problems with donor identification and/or management (42%) and family or coroner refusals (26%) (Wight, Cohen, Miranda, Fernandez, & Beasley, 1998). Finally, only 39 per cent of potential donors were referred to the relevant transplant organisation in a Czech Republic sample. Despite not specifically investigating the causes, this is one of few studies that posits “the duty of intensive care physicians to improve organ donation is not stressed sufficiently by hospital authorities” (Pokorná et al., 2003, p. 636), which is a theme that warrants further investigation and is further discussed in sections 2.3.6 and after.

Like the 90 per cent request rate reported by a recent study of 28 Australian hospitals (NHMRC, 2009b), as many as 93 per cent of brain dead patients’ families were approached about donation in a NSW study completed nearly two decades earlier (Hibberd et al., 1992). Interestingly, potential donors who did not present with brain death, but became so during hospitalisation, were more likely to be unidentified by physicians. Hibberd and colleagues (1992) thus reported that the senior physician was the major barrier to organ retrieval, due to insufficient medical intervention (withdrawing resuscitation). The second most common cause of failing to convert potential into actual donors was due to the 45 per cent of next-of-kin refusing to consent. When compared to actual donors, missed donors were older and less likely to die from traumatic brain injury or in the ICU, leading
the authors to conclude that the intervention phase of their study might assist in raising donation awareness amongst physicians. Of course this course of action does not generalise to benefit all Australian physicians.

In their Victorian hospital audit of 220 patients, Opdam and Silvester (2006) more recently reported 85 per cent of potential donors’ next-of-kin were approached about donation, a percentage that is encouraging but with significant room for improvement, particularly when it is known that just one extra donor can improve or save the lives of up to 10 seriously ill people. Another interesting result was that lower next-of-kin consent rates were reported when discussions were carried out by trainees or registrars (21% success rate) than when senior physicians were present (57% success rate) (Opdam & Silvester, 2006). This is a finding that is well replicated in numerous studies around the world and suggests that communication skills and appropriate training in approaching relatives can have a significant impact on donation rates.

When a UK survey presented 380 ICU staff with a list of nine potential barriers to retrieving donations in their own units, the factor identified as of the greatest importance was a dislike of adding to relatives’ distress (Wakeford & Stepney, 1989). A large Swedish sample of neurosurgeons and anesthetists similarly found 55 per cent of respondents completely refrained from requesting donation in emotionally strained situations (Sanner, Nydahl, Desatnik & Rizell, 2006). Any unease amongst specialists who are looked upon for guidance will certainly be detected by relatives, and consequently will affect consent levels. In fact, Spanish research estimates as many as 20-24 per cent of potential donors are
lost subsequent to the family interview (Frutos et al., 2005). It has also been shown that physicians who request donation using a neutral rather than a pro-donation approach are major obstacles for organ donation (Sanner et al., 2006).

According to the majority of the literature, it is fairly well established that declaring a patient’s brain death to relatives and raising the option of organ donation should occur in two separate conversations and in that order (Childress & Liverman, 2006). Otherwise known as “decoupling”, this course of action has been described as important to increasing consent rates (Metzger et al., 2005) and is thought to lessen the conflict of interest perceived by some physicians (Childress & Liverman, 2006). Although the decoupling timing was supported by only 45 per cent of physicians in the Australian NODC sample, the mixed ICU sample also showed great variability as to the most appropriate time for donor coordinators to come to the hospital in response to a potential donor (Australians Donate, 2007a). The decoupling process was not a significant factor in a US study of donor and non-donor families, as higher consent rates were nevertheless obtained when the brain death explanation was provided at some point (Rodrique, Cornell, & Howard, 2006). This study instead found next-of-kin consent rates were significantly higher when the donation requester was perceived by relatives to be very compassionate (67.4%) as opposed to being somewhat compassionate (29.9%), or not at all compassionate (17.5%) (Rodrique et al., 2006).

It is therefore not surprising that a physician’s choice of words such as “harvesting” and other inappropriate communication has raised anxiety levels amongst relatives (Haddow, 2004). Yet direct communication that is free from
medical jargon was appreciated by the majority of approached families in the same qualitative study of donor and nondonor families (Haddow, 2004). Local phenomenological research found that a physician’s ability to reason and respectfully communicate with the family, was a pivotal theme for 15 physicians working in South Australian hospitals (Pearson, Hickson, Greenwood, Robertson-Malt, & Tucker, 1998).

2.3.3 Knowledge of Organ Donation and Acceptance of Donation after Brain Death

A comprehensive review of the organ donation and brain death literature succinctly summarised that “[e]ducation—for both healthcare personnel and the general public—is desperately needed” (DuBois & Anderson, 2006, p. 71). The overwhelming recommendation from most studies is that health professionals need and want more education and training on many aspects of organ donation (D’Alessandro, Peltier, & Phelps, 2008; Australian Collaborative, 2007; Bøgh & Madsen, 2005; Chernenko, Jensen, Newburn-Cook, & Bigam, 2005; NHMRC, 2009b; Prettas & Batten, 1988; Rodriguez-Villar et al., 2009; Sadala, Lorençon, Cercal, & Schelp, 2006). Across the world, medical staff feel under-prepared when having to approach bereaved families to discuss organ donation, with reluctance indicated in 32-91 per cent of samples from the Italy, UK, Canada, and USA (Chernenko et al., 2005; Guadagnoli et al., 1999; Kent, 2002; Prettas & Batten, 1988; Pugliese et al., 2001). One UK study observed that only 45 per cent of their nursing sample attempted to answer questions relating to the exclusion criteria for organ and tissue donation and only 5-13 per cent were correct (Kent, 2002). A limited knowledge regarding transplant survival rates and organ waiting
lists has also been reported in both medical and nursing staff (Chernenko et al., 2005; Pugliese et al., 2001).

It is promising to see nearly 70 per cent of a sample of Australian physicians reported being comfortable introducing and requesting organ donation from next-of-kin (Australians Donate, 2007). Yet, the knowledge deficit was still present, as evidenced by the fact that over 40 per cent of the mixed ICU sample were unaware of how many potential donors (approximately) were identified in their own unit within the past year and only 50 per cent knew the correct number of Australian’s waiting for a donor organ (Australians Donate, 2007).

A significant amount of confusion for organ donation seems to be exemplified by the brain death diagnosis. This despite the concept maintaining acceptance by the majority vast industrialised world (Bell, 2003). Indications of the controversy are most visible when the legal definitions of brain death are compared internationally. For instance, Australian law defines brain death as “irreversible cessation of all function of the brain” (ALRC, 1977), the USA definition cites the plural: “the irreversible cessation of all functions of the entire brain, including the brainstem” (U.S. Government, 1981); and under UK legislation brain death is called “brainstem death” (Royal College of Physicians, 1995). This latter, less inclusive term reveals inconsistencies amongst the international medical community and raises valid research questions.

The acceptance of brain death being equivalent to human death continues to be questioned or misunderstood by some sections of the medical, ethical, and
general community (Bell, 2010; Cohen et al., 2008; Regehr et al., 2004; Shewmon, 1998a; 1998b; 2001; 2004; Sadala et al., 2006; Siminoff, Burant, & Youngner, 2004; Tibballs, 2008; Truog & Miller, 2008). Shewmon asserts that brain death does not equate to death of the “organism as a whole” (2001, p. 473), because the brain itself is not so much the centralised integrator of somatic functions but a mediator that augments the “quality and survival potential” of living beings (p. 457). To support this assumption, he cites extremely rare cases where brain dead individuals have survived, and even sexually matured, more than six months post-diagnosis with the permanent assistance of ventilators, artificial nutrition and nursing care (Shewmon, 1998a; 1998b; 2001; 2004). Shewmon rejects standard thinking that equates brain death to death on essentially biological rather than psychological, spiritual, or sociological grounds. Ironically, his opposing interpretation of what constitutes human life is also physiologically-bound and ignores the significance of conscious living. So while his reasoning about the inadequacies of the English language to appropriately define death as a process, not an event is well accepted, his interpretation of brain death equating to some form of human life remains the minority view.

In fact, when Australian physician, Tibballs, similarly contended that the public are misled to believe that organ retrieval occurs from “actually dead” donors (2008, p. 354), his comments drew heavy criticism for undermining the medical profession, challenging the law and scaring the public without providing any helpful solutions (Naffine et al., 2009). At no stage have brain death proponents disregarded such findings that pregnant female brain dead bodies may be medically supported until their unborn fetus has a better chance of life.
However they argue exactly that point—only bodies can be artificially maintained, as medical technology can replace or support any organ except the brain (Shemie, 2007). Commentators furthermore dismiss suggestions that the brain death concept is not a realistic determination of death by highlighting the knowledge that the time to death for each cell and each organ will vary significantly and can take up to several hours (Shemie, 2007; Naffine et al., 2009). Therefore, irrespective of organ donation contexts, even if it were feasible to measure neurological death processes on a cellular level, it would seem unnecessary, even unjustifiable to physicians, policy makers, and the public, to have to wait several hours before a deceased patient could be legally declared dead. Technological advances may have deepened our understanding of the complex spectrum that is life and death, yet this increased knowledge comes with the increased potential for uncertainty and the continuous need for societal agreement.

While a more detailed technical and legal review of brain death is outside the scope of the current research (for an animated Australian examination, see Tibbals, 2009; and Naffine et al., 2009), organ donation research should continue to assess whether the brain death controversy is impacting on physician conversion behaviour. For instance, according to the 2007 Australian NODC survey (Australians Donate, 2007a), less than 50 per cent of the mixed ICU sample felt confident to specifically explain the brain death concept to families, compared to nearly 80 per cent of physicians. An investigation into the possible effects of attitude to brain death on the organ retrieval process revealed that 79 per cent of Israeli physicians and nurses accepted brain death as a valid determination
of death, which was significantly associated with increasing age and ICU experience (Cohen et al., 2008). Only 54 per cent of physicians and nurses in a Danish study acknowledged having enough brain death knowledge to describe it to the bereaved family and even fewer (42%) had sufficient knowledge to approach the next-of-kin about organ donation (Bøgh & Madsen, 2005). The perceived lack of understanding of the brain death diagnosis varies between 31 and 88 per cent of samples from Italy, Korea, Canada, and USA, where nurses tend to have lower knowledge of and more discomfort with the concept, than physicians (Chernenko et al., 2005; Kim et al., 2006; Prottas & Batten, 1988; Pugliese et al., 2001).

A study conducted in the Czech Republic specifically found that the potential donor pool would have improved by 40 per cent if physicians had followed the brain death screening protocols instead of ignoring them (Pokorná et al., 2003). Given Spain’s high donation rates, it is somewhat surprising to find only 57 per cent of a large Spanish transplant hospital sample understood the brain death concept, which was found to be positively correlated with attitudinal support for donation (Ríos et al., 2006). A knowledge deficit may explain why between 44 and 60 per cent of physicians and/or administrators do not like being involved in declaring brain death (Chernenko et al., 2005; Prottas & Batten, 1988; Wight, Cohen, Roels, & Miranda, 2000). A phenomenological study of 10 ICU physicians working in Brazil reported that some physicians felt under-prepared to discuss organ donation with relatives, found the brain death diagnosis difficult to explain and had insecurities about the effectiveness of brain death testing (Sadala et al., 2006).
Comparative levels of confusion about brain death are seen amongst medical students across different cultures. An American sample found only 28 per cent of students have accepted brain death as human death (Edwards et al., 2007), compared to 46 per cent of a Japanese sample (Ohwaki et al., 2006), and 64 per cent of a Canadian sample (Bardell et al., 2003). As many as 63 per cent of Turkish medical students report having “no idea” about the organ donation process but when asked which organs can be transplanted 87 per cent of students knew the correct answer (Goz et al., 2006). Medical students from an American university answered less than half the knowledge questions correctly (Edwards et al., 2007). Similar results were reported in a sample of Canadian medical students where half of the students assumed that people of certain religious groups should not be approached about donation at all (Bardell et al., 2003). This hesitation to approach certain religious groups is well replicated in local (NHMRC, 2009b) and international physician literature (Chernenko et al., 2005; Guadagnoli et al., 1999; Regehr et al., 2004), in addition to lower approach rates reported for minority racial groups (Guadagnoli et al., 1999). This highlights the serious likelihood of missed donors, as well as denying the potential donor family an option that may assist their grieving.

According to the investigators of recent medical student research, there is a lack of formal education regarding donor identification and the appropriate methods for approaching a potential donor’s family (Bardell et al., 2003). This potential teaching deficit was cleverly demonstrated in an analysis of critical care nursing textbooks, where useful information relating to organ donation was found
in only six of 14 textbooks (Kirchhoff, Beckstrand, & Anumandla, 2003). Six of
the 14 textbooks also had valuable information on brain death, whilst another two
briefly mentioned the concept (Kirchhoff et al., 2003). Remarkably, a
comprehensive review of the end-of-life care curricula (Mularski, Bascom, &
Osborne, 2001) also failed to include crucial organ maintenance and recovery
information. Findings such as these may explain why some physicians are deemed
to be “uncomfortable at the clinical juncture where end-of-life care and organ
donation interface” (Mandell et al., 2006, p.2957).

Despite Japanese medical students demonstrating increased knowledge of
organ donation and transplantation compared to other university students, there
were no significant differences in willingness to donate their own or family
members’ organs (Ohwaki et al., 2006). This appears to be one of few studies
unsupportive of a relationship between knowledge and attitude to organ donation.
It is generally found that a higher degree of knowledge about donation and
transplantation correlates to a more positive attitude toward donation (Ingram et
al., 2002). This correlation is demonstrated by findings that health professionals’
communication skills are typically enhanced when they have improved
knowledge of donation and transplantation.

2.3.4 Acceptance of Donation after Cardiac Death

Modest changes in the international organ shortage meant other solutions were
desperately needed. Still, international and local professional understanding and
acceptance of DCD is well behind DBD, with “unresolved” ethical problems
being described as the “major stumbling blocks” to widespread hospital
implementation (Keenan et al., 2002, p. 30). Lack of education and standardised protocols, negative attitudes, moral distress, potential for abuse contributing to death, lowering standards of patient care, conflict of interest, and procedural concerns are just some of the suggested reasons for the lagging uptake of DCD programs (D’Alessandro et al., 2008; Mandell et al., 2006). The emergence of such divisive themes from these international qualitative physician studies are a pressing call for replication amongst Australian samples.

Some commentators have specifically attributed the noted resistance to DCD to questions about organ viability compared to DBD (Bell, 2003; Mandell et al., 2006; Reich et al., 2009; Truog & Miller, 2008), due to the failing blood and oxygen supply to organs following treatment withdrawal, known as the “warm ischaemic time” (Tibballs, 2008b, p. 334). The liver, in particular, has been identified as particularly sensitive to ischaemia (Renz, 2008). These concerns endure despite mixed research, which suggests that there may be no significant difference in long-term post-transplant outcomes, particularly across the various organ types (Boucek et al., 2008; Devey & Wigmore, 2009; de Vries, Snojeijs, & van Heurn, 2010; Snell & Levvey, 2009; Suntharalingam, Sharples, Dudley, Bradley, & Watson, 2009).

In a bid to lessen warm ischaemic times and therefore improve DCD organ vitality, antemortem interventions have been suggested, causing considerable controversy amongst the medical, legal, ethical, and general community. Even the term antemortem has been debated, as some say premortem is more fitting and
better understood by the public. In line with Australian expectations (NHMRC, 2009a) and presumably a desire to lessen the likelihood of public distrust, this paper will use the term antemortem to describe those interventions which are given prior to death to assist organ functioning and retrieval.

Ranging in intrusiveness from giving the patient anti-coagulation Heparin medication to inserting a cannula in the groin, critics argue, that at best, antemortem interventions raise a conflict of interest and do not conform to informed consent requirements (Bell, 2003; Tibbals, 2008b). At worst, antemortems have been accused of blatantly violating the Dead Donor Rule (DDR) and even of hastening or causing death (Gardiner & Sparrow, 2010; Rady, Verheije, & McGregor, 2008; Tibbals, 2008a, 2008b). However, a growing body of medical and ethical experts rejects these claims by arguing that the appropriate selection and dosing of antemortem interventions need not cause harm (Reich et al., 2009). It has also been argued they may actually serve the patient’s best interests if the person concerned had previously expressed consent for donation (Naffine et al., 2009; Richards & Rogers, 2007).

Australia’s first National Draft Protocol for Donation after Cardiac Death (NHMRC, 2009a) delineates that antemortem interventions can only occur if the patient is competent and consents, or if the senior NOK provides consent. Yet the draft guidelines go on to say that “the administration of antemortem interventions must comply with jurisdictional legislation or guidelines and institutional protocol” (pg. 8). This is where the uncertainty lies, because current Australian guardianship legislation is unclear as to whether antemortem interventions can be
legally justified under the best-interests standard (Naffine et al., 2009; Tibballs, 2008b). Only NSW and QLD state legislation explicitly forbid antemortem intervention, which is akin to UK policy, but in the USA, antemortem intervention is common practice (Gardiner & Sparrow, 2010; Suntharalingam et al., 2009).

Inconsistent guidelines and policies for determining death in the potential DCD donor are also passionately debated, both in Australia and overseas (D’Alessandro et al., 2008; Keenan et al., 2002; Mandell et al., 2006). While there is a significant lack of published studies regarding the prediction of time to death or the withdrawal phase of DCD (Suntharalingam et al., 2009), there is a burgeoning literature regarding the medical, ethical, legal, and philosophical aspects of declaring irreversibility of death in the DCD donor. Australian legislation and the recently released National draft DCD guidelines are once again undefined. The latter suggests that the minimum requirement to establish irreversibility should not be less than a two minute observation time of the absence of pulse, but not exceed five minutes (NHMRC, 2009a). While the Pittsburgh two minute protocol (University of Pittsburgh Medical Centre, 1993) gains considerable local (ANZICS, 2008) and worldwide acceptance (Bernat, 2008; Rogers, 2009; Shemie, 2007), numerous commentators continue to debate the length of time needed to ensure death and avoid auto-resuscitation (where circulation reestablishes itself spontaneously). Estimates are as low as 75 seconds (Boucek et al., 2008), as high as five or ten minutes (Bell, 2005; Mandell et al., 2006; Veatch, 2008) and everywhere in between (e.g. Canadian Council for Donation and Transplantation). Others conclude that it is the context of the treatment withdrawal rather than the time per se that is most important to establish
irreversibility of the circulation (Bernat, 2008; Keenan et al., 2002; Shemie; Snell, & Levvey, 2009). In other words, in circumstances where the decision to withdraw treatment and not attempt resuscitation has been made independently of organ donation, it is the loss of function that meets one definition of irreversibility (Veatch, 2008).

A recent systematic review of auto-resuscitation after cardiac arrest concluded that current data are of “insufficient quality to support or refute the recommended waiting period to determine death” following cardiac arrest in the context of DCD (Hornby, Hornby & Shemie, 2010, p. 1251). The reviewers did however go on to clarify that there has been no auto-resuscitation reported in the absence of resuscitative treatments (cardiopulmonary resuscitation [CPR]), which is the context in which controlled organ donation after cardiac death occurs.

Nonetheless, in a further bid to ensure the irreversibility criterion has been met, some DCD protocols, including NSW state guidelines, demand “stand-down”, “time-out”, or “no touch” observation periods after death once the cessation of circulation has been declared. Recommendations again vary between waiting a further two to ten minutes before any organ retrieval procedures can occur (de Vries et al., 2010; Reich et al., 2009; Tibballs, 2008b). Once again, our national DCD draft guidelines (NHMRC, 2009a) are not definitive in that, although they do not oppose the NSW stand-down criteria, they also do not specifically endorse their need.
2.3.5 Misconception and Fear

This collective research indicates that some health professionals, even those working within transplant hospitals, maintain a level of uncertainty, distrust, or fear regarding the organ donation process. In amongst those factors identified thus far, other concerns include: fear of public disapproval (Mandell et al., 2006); being perceived as eliminating the family’s hope (D’Alessandro et al., 2008); acting unlawfully (Bell, 2003); mutilation/disfigurement of the donor (Chernenko et al., 2005; Ingram et al., 2002; Kent & Owens, 1995); existence of frequent medical errors (Ríos et al., 2005); the notion that one might need their organs or tissues in the after-life (Kent, 2002; Kim et al., 2004); the inappropriate discarding of body parts (van Diest, Lopes Cardoso, & Niesing, 2003); and a lack of respect for the deceased (Dow, 2006).

If misconception or fear about the donation process exists amongst some health professionals, it will prove extremely difficult for relatives to be consensual toward donation, particularly during times of incredible distress. Although data is lacking about the fears and misconceptions of Australian health professionals, there is an incorrect assumption amongst the general public that a person's decision to donate will permit the removal of organs for any other purpose (LIFEGift, 2007d). This comes despite the Australian law that demands separate and specific consent for science or research donation (Healey, 2003). Overall, there is an obvious gap in our knowledge regarding the magnitude and impact of health professionals’ fears and misconceptions about the donation and transplantation processes. This is particularly the case for Australian samples.
2.3.6 Professional Responsibility

When asked why a potential donor was missed in an Australian hospital, the attending physician responded that he had not thought of donation at the time (Opdam & Silvester, 2006). This particular mindset raises the question to what degree do health professionals consider their role in the donation process. It seems unlikely that potential donors will be efficiently identified and accessed if those who are in a position to do so, do not assume it is their responsibility.

Depending on the hospital and region, it has been suggested that most hospital administrators do not emphasise the physician’s responsibility to improve organ donation rates (Pokorná et al., 2003). However, the experiences of 15 Australian physicians revealed an acute sense of obligation to the organ donation cause, which may result in an uncomfortable division between their professional responsibility and personal beliefs (Pearson et al., 1998). Furthermore, these physicians stressed the need for considerable waiting and observation of both the patient and their family, while still maintaining a forced distance from the family due to a busy schedule. This was considered necessary for their ability to perform their other professional responsibilities.

Overseas, it has been suggested that the already burdened ICU staff may resist launching into a course of action that will result in extra work, especially work that is considered a secondary priority (Pokorná et al., 2003). Some health professionals even appear to resent the time, effort, and expense involved in the care of a potential donor (Chernenko et al., 2005; Cohen et al., 2008; Meyer & Bjørk, 2007; Pratts & Batten, 1988; Sanner et al., 2006). To counteract such
concerns, recommendations have been made to provide increased post-transplantation outcome information to staff involved in the donor care, retrieval, and transplantation process, as well some acknowledgment of the time and effort expended (Chernenko et al., 2005; Regehr et al., 2004).

Additional research indicates that many health professionals find the organ donation process to be an extremely stressful and emotionally draining experience (Gross et al., 2000; Hibbert, 1995; Regehr et al., 2004; Sadala et al., 2006), which must ultimately impact on their subsequent involvement. Some investigators believe that these social and interpersonal factors are the main determinants influencing a health professional’s involvement in donation, rather than medical uncertainties (Prottas & Batten, 1988; Ríos et al., 2005).

2.3.7 **Intra-Hospital Practicalities**

Even if health professionals act efficiently and compassionately, there are a number of intra-hospital factors that impact the success of any hospital’s donation rate. Most obviously, the size of the hospital (Carter, 2003; Roggenkamp, Aldridge, Guy, & Rocheleau, 2007) and its potential for suitable deaths (Hibberd et al., 1992) will dictate the size of the potential donor pool. Generally, high potential donor rates are thought to occur in hospitals where more than three out of 100 deaths are medically suitable for donation (Matesanz, 2004; Sheehy et al., 2003). Hospitals that are fortunate enough to have organ donation coordination teams and multiple donation coordinators have also reported higher numbers of brain dead patients in some regions (Sheehy et al., 2003), but not others (Wakeford & Stepney, 1989).
Other intra-hospital factors that correlate with increased donor pools include greater availability of ICU beds and donor management equipment (e.g. mechanical ventilation) (Bell, 2003; Sanner et al., 2006; Sheehy et al., 2003), the presence of an emergency and/or neurosurgical department (Senouci et al., 2004; Roggenkamp et al., 2007) and the awareness of unit policies on brain stem death and other donation related protocols (Chernenko et al., 2005). For example, one Canadian study found that more than half of the nursing staff and hospital administrators were unaware of their own hospital’s donation protocols, and as many as 75 per cent were unsure (Chernenko et al., 2005).

Finally, the availability and appropriate allocation of financial resources can ultimately impact donation rates; the same Canadian sample reported 80 per cent of administrators but only 20 per cent of physicians believed sufficient funding had been allocated to maintain ventilator-dependant patients assessed for brain death (Chernenko et al., 2005). Furthermore, 50 per cent of the same sample of physicians did not believe they were appropriately compensated for their participation in the donation process.

2.4 Hospital-Based Initiatives to Improve Donation Rate

Perhaps the strongest evidence for the health professionals’ influence on organ donation rates comes from hospital-based training initiatives such as the European Donor Hospital Education Programme (EDHEP), Donor Action programme (DA), the Spanish model and The Collaboratives (USA, Canada, and Australia). Collectively, the overarching aim of these initiatives is to provide formal
transplantation education within the hospital environment, through the implementation of a donor coordination programme that is specific to the participating hospital(s). Across a wide variety of countries, it has been shown that staff support, knowledge, competence, and subsequent donor identification rates will increase as a direct result of the initiatives (Blok et al., 1999, 2004; Marks et al., 2006; Matesanz, 2004; Mathew & Chapman, 2006; Milanaés et al., 2003; Miranda, Vilardeil, & Grinyó, 2003; NHMRC, 2009b; Pugliese et al., 2003; Singer & Rachmani, 1997; Wight et al., 2000). For example, there was a seven-fold increase in the number of actual donors just two years after the DA program was implemented in the Emilia-Romagna region in Italy (Pugliese et al., 2003).

Following the implementation of EDHEP, samples from the UK and the Netherlands also reported sustained improvement in staff rated self-efficacy scores, which was significantly correlated with decreases in the perceived difficulty of requesting organ donation from next-of-kin (Wight et al., 2000).

To my knowledge, final implementation results from the Australian Collaborative (NODC), completed in June 2009, are still pending at the time of writing. However, results up to December 2008 suggest that Australia’s organ donation rate had improved from 10 DPMP to 12 DPMP, with the 28 participating NODC hospitals reporting the greatest improvements in donor numbers (NHMRC, 2009b). The development and implementation of best practice in potential donor identification and the provision of suitable information and support to their families, has been directly attributed to this substantial increase. Additional factors include advocating organ and tissue donation in hospital
mission statements, business plans, policies and procedures; ensuring a multidisciplinary team of physicians manages the process for each potential donor; practicing early referrals (use of clinical triggers in ED); preparing for DCD; and involving senior leaders “to get results” (Australians Donate, 2007a; NHMRC, p. 17).

Australia’s most eagerly awaited reform results however, are those due to be released following the 2009 establishment of the Australian Organ and Tissue Donation and Transplant Authority (The Authority), which was born out of the recommendations of the National Clinical Taskforce on Organ and Tissue Donation (The Taskforce) (NCTOTD, 2008). Executed by The Authority, this four year, 151.1 million dollar Commonwealth reform package is known as A World's Best Practice Approach to Organ and Tissue Donation for Transplantation and is designed to coordinate Australia’s fragmented donation sector, made up by states, territories, clinicians, consumers and the community. The 2008-2009 performance results released thus far (Australian Government, 2009) suggest that The Authority is making some gradual progress towards their nine, very broad measures. These measures are:

1. A new national approach and system—a national authority and network of organ and tissue donation agencies.
2. Specialist hospital staff and systems dedicated to organ donation.
3. New funding for hospitals.
5. Coordinated, ongoing community awareness and education.
7. Safe, equitable, and transparent national transplantation process.

8. National eye and tissue donation and transplantation network.

9. Additional national initiatives, including living donation programs.

Of these nine broad measures, considerable progress has occurred for the measure most pertinent to the current enquiry (Measure Two), where state and territory-based Medical directors were appointed by June 2009 and hospital-based medical directors and nursing staff were appointed towards the end of 2009. Clinical triggers had also been presented to the relevant professional societies for endorsement. Still, The Authority’s bureaucratic links with the federal health department has led to criticism that it cannot be the independent body needed to enact the major confrontations that have been missing from sector revamps to date (Robotham, 2009). Some say The Authority’s tentative approach can already be evidenced by their unwillingness to project specific numerical targets, so that they cannot be held accountable for disappointing change in statistics (Robotham, 2009). This has been demonstrated by The Authority’s 2008-2009 annual report being devoid of tangible statistics when “performance reporting” on their nine key measures (p.17).

Although it is only 1.5 years into The Authority’s 4-year tenure, examination of the ANZOD registry reveals that its first year was met with a decrease in total Australian donations from 12.1 DPMD in 2008 to 11.3 DPMP in 2009 (ANZOD, 2008, 2009). Furthermore, the number of donations that did not proceed despite consent being obtained (13), is currently slightly higher than the number recorded (11) at the same point in time last year (ANZOD, 2009, 2010). Conversely,
significant improvements have been recorded in the number of DCD donations, with an extra 19 cardiac death donors in 2009 compared to 2008 rates (ANZOD, 2008, 2009).

2.5 Summary

Assuming that attending physicians remember to consider the suitability of donation within the critical period, the factors outlined above represent barriers to organ donation as identified by researchers and health professionals around the world. At the very least, research indicates that the attitudes and knowledge levels of health professionals can greatly impact organ donation rates (Cohen et al., 2008; Ohwaki et al., 2006) and in particular, a physician’s position on these matters can influence other professionals (Prottas & Batten, 1988). Investigations of attitudes and knowledge alone do not disclose the complete picture (Kent & Owens, 1995). It remains unclear whether communication or resourcing difficulties, or any of the other factors identified above, act as significant barriers to higher donation rates in Australia’s hospitals. Compared to the literature on donor families and nurses, there is a significant deficit of qualitative research conducted with physicians, particularly in Australia, and particularly since the advent of DCD and The Authority’s proposed introduction of Specialist hospital staff and systems dedicated to organ donation. Furthermore, existing studies seldom extend into theory-building.

In addition, little attention has been directed at the psychological and social effects of donation and transplantation on health professionals (Sque & Payne, 2006), which must influence their subsequent behaviour to some degree. It has
been suggested that a one-on-one research approach would permit a deeper understanding of their reasons for, or lack of involvement in, the donation process (Ingram et al., 2002; Kent & Owens, 1995). For instance, the consistent finding that most people (public and hospital staff) are happy to receive an organ, but less inclined to personally donate (Ingram et al., 2002). The true relationship between attitudes and their ability to explain behaviour remains unclear, despite often overwhelmingly positive attitudes toward donation being reported amongst health professionals. This failure to act on beliefs is concerning if one considers how those who are unwilling to consent to donating their loved ones’ organs will be effective in approaching donor families to do so (Chernenko et al., 2005; Kim et al., 2006; Pratts & Batten, 1988; Pugliese et al., 2001). Taking these knowledge gaps into account, the rationale for the current study is discussed in chapter three, but not before an examination of the shortcomings of three theoretical models that have been proposed to explain and predict health professionals’ involvement in the organ donation process.
Chapter Three: The Research Process

3.1 Introduction

An earlier review of the literature suggested that established theoretical models of attitudes and decision-making have not been well utilised in organ donation research (Radecki, 1997). This has resulted in a deficit of collective knowledge and structure within the field (Shanteau, 1986, as cited in Radecki, 1997). Furthermore, the existing abundance of survey data has been criticised for its limited scope and application (Shanteau as cited in Radecki). This chapter therefore describes three of the current theories or models that have attempted to explain some aspects of physicians’ behaviour in the donation process. Because of their influence on other health professionals (Prottas & Batten, 1988), the need for greater qualitative, theory-building research regarding physicians in particular is argued. To conclude, the merits of an empirical study designed to elucidate the current steps taken by a physician to convert potential organ donors, is described.

3.2 Currently Applied Theories

Of the few studies that utilise theory to explain findings, classic attitude-behaviour models are popular, the most common being the Theory of Planned Behaviour (TPB) (Azjen & Fishbein, 1980). In an extension to the Reasoned Action Theory (Fishbein & Azjen, 1975), the TPB argues that people maintain beliefs that underpin attitudes, subjective norms, and perceived behavioural control, which influences their capacity to carry out future actions (Kent, 2002). Subjective norms are defined as the individual’s perception that most people significant to them believe they should or should not carry out the behaviour in question (Azjen & Fishbein, 1980). Thus one’s beliefs about resources,
opportunities, and past experiences are all factors that will affect a person’s perceived behavioural control and the level of difficulty they assign to a proposed action (Kent, 2002). The interrelationships between the concepts of the theory relevant to organ donation are described in Figure 3.1.

![Figure 3.1. Operationalising the theory of planned behaviour in health professionals](image)

*Figure 3.1. Operationalising the theory of planned behaviour in health professionals*

_Note._ From “Psychosocial factors influencing a nurse’s involvement with organ and tissue donation”, by B. Kent, 2002, *Transplantation Reviews, 15*, p.35. Copyright 2002 by Elsevier Science Ltd.

The TPB has been used extensively to predict, explain, and influence human behaviour (Azjen & Fishbein, 1980) but its use in physician and hospital management samples of the organ donation literature is very limited. Presumably this is because the TPB does not account for the true complexity of asking about organ donation. It ignores a physician’s legal and operational confidence, as well as subconscious cognitive thought schemata, instincts, and motivators, to name
but a few factors that must arise, particularly within highly emotive and time­pressured environments like the ICU. Rather, the TPB assumes “that people are usually quite rational and make systematic use of information available to them” (Azjen & Fishbein, 1980, p.5). Although this would be a professional aim of most physicians and hospital administrators, whether such rationality always eventuates, especially in the face of an emotionally complex and humanistic process such as organ donation, remains to be effectively determined. Additionally, the TPB cannot account for the influence of factors such as a physician’s knowledge or communication style, or the resources available within the hospital unit.

While still noting the importance of attitude in guiding one’s behaviour, recently developed models more effectively explain the complexity of the donation and transplantation process by acknowledging factors such as the physician’s workload and qualifications, or the hospital’s culture or motivation for donation. Figure 3.2 is a representation of this more encompassing model, which is still limited in its offering because it only outlines the pathways for detection and referral. It neglects other responsibilities of the physician, such as the request and donor management processes, which have been found to directly relate to actual donation rates.
Figure 3.2. Motivational and organizational factors influencing detection and referral rate of potential organ donors in the hospital setting


This model by Gold and colleagues (2001) also ignores staff knowledge and confidence levels, donor maintenance procedures, and intra-hospital practicalities, as well as many of the other variables outlined in the above review of the empirical literature.

Through their rigorous qualitative study of physicians, nurses, clergy/social work staff and administrators, D’ Alessandro and colleagues offered a model for predicting DCD support that is depicted in Figure 3.3.
While still yet to be tested amongst broader samples, this model offers useful insight into the possible elements preventing better acceptance of DCD in the medical and general community. The authors’ specific delineation of four negative and three positive factors they believe may contribute to one’s support for or unease about DCD supports the documented quantitative findings that a number of unresolved issues are preventing increased DCD acceptance. The benefit of this highly situation-specific model is that it offers tangible starting points for researchers, educators, and even DCD organ donation program
development. A shortcoming of this specificity is that this model can only explain attitudinal findings for DCD and, as observed via attitude-behaviour models like the TPB (Azjen & Fishbein, 1980), attitude is not always a reliable predictor of one’s behaviour, particularly in processes where there is more doubt or ambivalence than confidence (Glasman & Albarracín, 2006) — recall Figure 3.3 lists more negative contributors than positive.

Overall, it seems that available models explain only some of the variance in the practice of converting potential organ donors and there are few, if any, relatively analogous processes to identifying, requesting, and managing an organ donor in one’s capacity as an ICU physician. Processes such as live kidney, blood or reproductive tissue donations are less time-sensitive and do not generally involve deceased donors; therefore, physicians can directly approach the donor, rather than next-of-kin, for consent (unless the donor is deceased or medically unfit to consent). Thus, the need remains for a more comprehensive theory as to why physicians convert some potential organ donors but not others. Such a model may then offer practical utility for policy development.

### 3.3 Research Questions

There has been good progress in health professional organ donation research but much remains to be known, particularly about the Australian sector since the resurgence of DCD. A new approach is required if researchers and policy makers are to fully comprehend factors associated with physician facilitation of organ donor conversion. It remains unclear what differentiates a potential donor from being considered a real donor opportunity, according to those in charge of the
process, the ICU physicians. Furthermore, even if a potential donor has been identified, what is preventing physicians from supporting these types of patients so that they may become actual donors? A substantive model of the physician’s role in the conversion process may offer valuable insight and force a re-examination of attitude, practice, and, ultimately, behaviour.

As identified by the empirical literature, the dimensions the present research examines therefore includes the attitudes, motivations, confidence, and behaviours of senior medical staff; the policies, procedures, and culture of the work unit; and the nature and infrastructure of the department.

3.4 Methodological Approach

To best address the unanswered questions outlined above, a method was needed that described variation, explained relationships, emphasised understanding, and provided a rich picture of reality. This called for a more flexible orientation than quantitative research could provide but one where a number of qualitative inquiry methods could offer at least some of these attributes. Hence, the most pivotal research contribution needed to better understand and explain physician donor conversion behaviour would come from a more comprehensive theory or model of the complex process. As its name suggests, Glaser & Strauss’s Grounded Theory Method (GTM; 1967) is apt for the generation of a theory derived inductively from field data by studying multiple individuals who have participated in a process about a central phenomenon (Creswell, 1998). It is particularly useful to modify existing theories if they do not suit the sample population or the complexity of the process being examined
(Creswell), such as the limited TPB and that proposed by Gold and colleagues (2001). The application of GTM allows for the development of categories and themes inductively rather than imposing pre-determined classifications on the data (Glaser, 1978), which in turn leads to a narrative statement, hypotheses, or propositions.

Since its inception in 1967, there have been many revisions and epistemological reviews of GTM, leading even its creators to part ways sometime prior to 1978. While an assessment of the enduring debate would prove too great a diversion from the aims of the current thesis (and has been adequately replayed elsewhere, see Bryant & Charmaz, 2007), a summary of the genealogy of GTM is nonetheless reproduced in Figure 3.4.
As shown in Figure 3.4, a number of researchers have taken up Glaser and Strauss's initial invitation to creatively develop their own use of grounded theory strategies (Charmaz, 2006) or to respond to its methodological limitations. Unlike traditional grounded theory, Bryant (2002), Charmaz (2006), and Clarke (2005) approach GTM with a postmodern, Constructivist orientation where no assumptions are made about the researcher's neutrality or naïve objectivity for the subject matter. Instead of "discovering theory as emerging from data separate" from the researcher, constructionist GTM’s founder assumes that "neither the data nor theories are discovered. Rather we are part of the world we study and the data
we collect” (Charmaz, 2006, p. 10). While I initially was a novice to the field of organ donation, as a community-minded member of society (and a registered donor), I was aware I had some views or preconceptions about our inadequate donation rate. Thus, I felt this more reflexive, interpretative philosophy was more fitting and likely to generate more credible analysis. After all, reflexivity has been shown to minimise prior knowledge distorting the researcher’s perceptions of the data (McGhee, Marland, & Atkinson, 2007).

Instead of following traditional grounded theory rules that discount variation by seeking simplification and conclusiveness (e.g. the derivation of one core category), constructionist GTM offers flexible guidelines that are designed to elucidate the variability inherent in complex processes. Also dissimilar to “positivist” grounded theory where the goal is often to delineate a basic social process and formal theory, the goal of postmodern grounded theorising is to construct process and theorise working understandings in a grounded fashion (Clarke, 2005a). Any assumptions regarding causality are made conditionally and are left open to further adoption (Parker, 2004). As opposed to formal theory used to develop a broader conceptual area of inquiry, substantive theory is developed for an empirical area of inquiry (Minichiello, Sullivan, Greenwood, & Axford, 2004). In other words, substantive theories relate to the particular social phenomenon being examined and not to a broader range of phenomena that formal theory might be expected to (Bryman, 2004). Inline with Constructivist GTM, I do not suppose my substantive interpretation of the Australian physician donor conversion process will have any broader applicability than its original
purpose, but this is not say it will not offer insight into other donation processes, systems, or contexts.

Akin to traditional GTM, open and selective coding processes, theoretical saturation, and constant comparative methods (Glaser & Strauss, 1967) are fundamental to Constructionist GTM. Constant comparative methods are used in data collection and analysis to propose and test links between categories, assisting the analyst to move from the level of description to one of abstraction (Corbin & Strauss, 2008). This is done by comparing data with data, data with category, category with category, and category with concept, to find similarities and differences, but not necessarily in such a linear fashion (Charmaz, 2006). The researcher’s written memos or the “running logs of analytic thinking” are used to raise codes to tentative categories, to summarise and integrate categories, and, indicative of reflexivity, to allow inspection of one’s basic assumptions, biases, and perspectives (Corbin & Strauss, 2008, p. 108), amongst many other benefits.

As indicated in Figure 4.3, a further appealing aspect of Constructivist GTM is its logical collaboration and extension into Situational Analysis (Clarke, 2003, 2005a). Dissatisfied with only a conditional consideration of context in Strauss’s Conditional/Consequential Matrix and with action being at the core of the Matrix, Situational Analysis creator Clarke makes “the situation itself . . . the key unit of analysis per se” (Clarke, 2003, p. 559). This meso-level theory broadens institutional studies beyond their conventional boundaries (Carder, 2008) and hence its relevance to the examination of institutionally-bound employers and processes in the current study. By replacing the basic social process concept
underpinning traditional GTM with Strauss’s social worlds/arenas/negotiations framework, Clarke introduces three situational analysis techniques:

1. *Situational Maps* portray the major human, nonhuman, discursive and other elements in the research situation of concern and encourage analyses of relations among them;

2. *Social Worlds/Arenas Maps* depict the collective actors, key non-human elements and arenas of commitment within which they are engaged in ongoing negotiations or meso-level interpretations of the situation; and

3. *Positional Maps* expose the major positions taken, and not taken, in the data in relation to specific discursive axes of variation, difference, and controversy complicating issues in the situation (Clarke, 2003, 2005a).

Intended to supplement, not replace, grounded theory coding and memo-writing paradigms, these analytic maps focus on provoking intricacies: “the key elements and conditions that characterize the situation of concern in the research project broadly conceived” (Clarke, 2003, p. 554). By “deeply” situating the research individually, collectively, temporally, culturally, social-organisationally, and institutionally, Clarke convincingly argues that more “thick descriptions” should result than those presented by grounded theory studies that fail to fully evaluate the situation and current research context (2003, p. 554; 2005b). Clarke points out the analytic omission of time or the “unconditional present” that is acceptable to many researchers is not only wrought with “unacknowledged imperialism” (2005a, p.299), but is likely to generate highly misrepresentative or rapidly out-dated findings. This would certainly have been the case if the current
research had not fully taken into account the major organisational and procedural developments that occurred within the Australian organ donation sector before, during, and after the actual data collection period.

Situational Analysis furthermore answers GTM criticism that minority views or groups can be easily ignored, particularly when following traditional grounded theory research designs (Clarke, 2005a). By assuming a postmodern stance to depict the true “messy” complexity and difference found in most human situations (rather than seeking standard simplifications), it is argued that silences can be made to speak (Clarke, 2003, p. 559, 2005a, 2005b). This is done by exposing the positions taken and not taken in the data, therefore, creating positional maps that may allow for a better representation of the several positions and inconsistencies inherent within individuals, groups, and organisations.

3.4.1 Procedure and Participants

This interview-based research project received Human Ethics approval from Deakin University, but multi-centre and specific site assessment approval was sought where required, see Appendix C. The plain language statement and consent form is included in Appendix D. All interviewees received an electronic copy of the statement and form prior to the interview date and a hard copy immediately before commencing the interview. Although an extensive literature search assisted the development of the initial semi-structured question list (representing another departure from traditional grounded theory), the questions were continually revised according to the thematic analysis of previous interview data. This was in addition to adaptation according to the current interviewee’s
responses and the current context of the donation sector; for example, questions about the Taskforce and their recommendations. This meant no two interviews followed the same course. Appendix E displays the initial set of interview questions.

In total, thirteen male and two female physicians participated in this research. At the time of interview, they were aged between 39 and 61 years and had averaged 20 years experience working as a physician (individual physician experience ranged between seven and 35 years). Throughout the paper, participants who are qualified ICU physicians are referred to as intensivists and participants who are qualified emergency department physicians are referred to as ED physicians. For intensivists, approximately 14 years of their physician experience had been accrued specifically in the ICU (individual specialty experience ranged between three and 27 years), while the ED physicians averaged at least 10 years experience in their respective specialty. Three of the 15 informants were principally employed at pediatric hospitals. Apart from working in Australia, interviewees had a wealth of international work or training experience, in countries such as Canada, UK, USA, Europe, India, Sri Lanka, and Ireland. No interviewees requested their participation be removed from the study.

The face-to-face interviews took approximately one hour per participant and were carried out on-site across six different public hospitals in New South Wales (NSW) and Victoria (VIC) (three hospitals per state). Five of the six hospitals had specific transplant units in operation at the time of data collection. In the year proceeding data collection (2006), the total donation rates of these two states were
amongst the nation’s lowest (7 DPMP and 9 DPMP respectively; ANZOD, 2007). However in the same year, these two states were also amongst the first to start recording DCD, where from a national total of eight DCD donors, four respective donors came from NSW and one came from Victoria (ANZOD, 2007). This meant that these two states were ideal to source a sample of physicians who were part of less-successful organ donation programs that appeared committed to extending donor opportunities through the incorporation of emergent DCD protocols. It is interesting to note that over the course of the project, both states recorded steady improvements to their respective total donation rates (10 DPMP in NSW and 12 DPMP in Victoria in 2009) and forged ahead as our national leaders of DCD (15 DCD donors from NSW and 17 from Victoria in 2009; ANZOD 2010).

Interviewees from major metropolitan hospitals were also approached due to the finding that the highest proportion of potential organ donors are found in large institutions (Sheehy, et al., 2003). Theory conceptualisation continued until categories and relationships were saturated, that is, additional data did not add to the developing theory (Charmaz, 2006; Glaser & Strauss, 1967; Spencer, Ritchie & O’Connor, 2003). This was achieved after 15 formal interviews.

In-depth, one-on-one interviews were chosen because they are ideal for understanding complex processes, issues, and motivations in non-threatening environments, whilst also inhibiting potential power or status issues that can be problematic to focus groups (Lewis, 2003). Given their time-pressured schedules,
the interview method for data collection has been specifically useful among health professionals (Younger, Landefield, Coulton, Juknialis, & Leary, 1989).

Access to interviewees was negotiated through contact made with the manager of each state’s governing body for organ donation (DonateLife VIC and NSW, previously known as LifeGIFT VIC and NSW). The two state managers then wrote and distributed a study information letter to several ICU hospital unit managers on my behalf. This letter invited physicians that were interested in participating in the study to contact me via email or telephone to gain further information about the proposed research. Additional participant access was later gained using “snowballing” purposive sampling techniques, once initial interviewing had commenced.

As indicated in Table 3.1, sampling was carried out over a number of phases according to the true grounded theory principle of theoretical sampling, where the aim was to develop the properties of the emerging categories (not to select representative sample distributions or to stop when no new data had emerged), (Charmaz, 2006). Constant comparative analysis revealed that later sampling needed to include ED physicians and those with DCD experience in order to accommodate the developing theoretical categories of DCD and end of life care (EoLC) practices. At the time of data collection, only NSW interviewees had active DCD protocols operating within their hospital units, with some units conducting DCD for more than 10 years. The number of beds per hospital unit ranged from 25 to 48 in emergency departments and between 16 and 42 beds in the ICU, with an average 25 beds per ICU.
Table 3.1

*Data Collection and Analysis Timeline*

<table>
<thead>
<tr>
<th>Stage</th>
<th>Date</th>
<th>State</th>
<th>Interviwees</th>
<th>Hospital and Unit Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Mar - Aug 2008</td>
<td>VIC</td>
<td>7 x ICU</td>
<td>Interviewees 1-2: Adult hospital 1 Physicians Interviewees 3-5: Pediatric hospital 1 (Intensivists) Interviewees 6-7: Adult hospital 2 These hospitals all had specific transplant units</td>
</tr>
<tr>
<td>Two</td>
<td>Nov - Dec 2008</td>
<td>NSW</td>
<td>5 x ICU</td>
<td>Interviewees 8-9: Adult hospital 3 Physicians Interviewee 10: Adult hospital 4 (Intensivists) Interviewees 11-12: Adult hospital 5 These hospitals all had active DCD protocols and except for adult hospital 3, they also had specific transplant units</td>
</tr>
<tr>
<td>Three</td>
<td>Oct 2008</td>
<td>VIC</td>
<td>1 x ED</td>
<td>Interviewee 13: Adult hospital 2 Physician (specific transplant unit)</td>
</tr>
<tr>
<td>Four</td>
<td>Dec 2008</td>
<td>NSW</td>
<td>2 x ED</td>
<td>Interviewees 14-15: Adult hospital 5 Physicians (DCD protocols and a specific transplant unit)</td>
</tr>
</tbody>
</table>

3.4.2 *Rigourous Analysis*

Interviews were recorded via voice recording and note-taking. Given the strict time-limitations and availability of this particular participant group, prompt transcription was paramount to allow sufficient constant comparative analysis to take place in between each interview, as per the GTM. For this reason, interviews were professionally transcribed verbatim by outsourced medico-science
transcribers but all transcripts were double-checked with original audio upon receipt, offering the additional benefit of multiple verification.

Following the constructionist grounded theory methods laid out by Charmaz, (2006), the data was inductively coded according to initial (word-by-word and line-by-line), focused, axial and theoretical principles. Memos, taken via written and voice-recorded mediums, occurred during and after every analysis and mapping session and assisted my awareness of potential personal effects on the data (McGhee et al., 2007). Constant comparative methods were pivotal to developing the analytic categories grounded in the data, while also advancing my initial, descriptive memos to become more abstract. The various positions that interviewees held on emerging issues were further analysed using Situational Analysis. This allowed fresh insight and different visual perspectives to emerge, broadening the analysis beyond what was initially obtained through coding alone. While all of Clarke’s cartographic methods were used to open up the data to further the analysis (see Appendix F and G for a sample of such maps), as is suggested by Clarke (2005a, 2005b), only certain maps are included in the final document. Consistent with grounded theory guidelines, the analysis phase of this project commenced at the outset of interviewing early in 2008 and continued well into the draft writing stage which was completed mid to late 2010.

NVIVO 7 (QSR International, 2006) was the qualitative software program chosen to manage the data. Use of computer-assisted software is thought to increase data organisation and therefore the analyst’s efficiency, adding to the rigour of the analysis (de Wet & Erasmus, 2005).
Overall, a number of reliability and validity strategies were incorporated into the study design to increase the rigour of the resulting research. From the commencement of the project, I received class-based, and then ongoing individual qualitative research methods training from published qualitative researchers as part of the psychology doctorate degree. This supervision and methodological training was supplemented by my participation in, and direct project feedback received from Situational Analysis creator, Clarke, during a two-day Situational Analysis workshop and intimate master class held in Sydney, Australia, 2009.

Based informally upon the validity principle of data triangulation (defined by Denzin, 1978, as the use of a variety of data sources in a study), three informal meetings were conducted between 2007 and 2008 with the state manager of Victoria’s governing body for organ and tissue donation. Multiple, biannual meetings were also conducted with the state manager and the medical consultant from the equivalent NSW body from 2008 to 2010. These meetings greatly assisted my understanding of the changing organisational and political situation that was Australia’s organ donation sector over the entire course of the research project.

Before the formal physician interviews commenced in 2008, insight into the specifics of the solid organ donation process was carefully gleaned from informal interviews with a highly experienced organ donation co-ordinator, and also a state coordinator of the organ donation bereavement program. This meant that the physicians did not have to assume that I interviewed with little or no knowledge
of the process in question, which was likely to attain richer and more valuable interview data than that otherwise obtained. Informal but in-depth interviews with two ICU Nursing Unit Managers in 2008 also facilitated broader insight into the institutionally-bound conversion process. Also, my attendance at the one-day medical workshop (module two) of the Australasian Donor Awareness Programme (ADAPT) in mid 2009, which prior to the Authority was the compulsory organ donation training program for ICU registrars. Aimed at providing a “consistent and uniform approach to educating health professionals involved in the care and management of dying patients and their families, including those patients who may become potential organ and tissue donors” (ADAPT, 2009, p. 7), this workshop also encouraged active discussion of current controversies which was useful in validating numerous components of my developing theory. Finally, I also sought an informal but in-depth interview with an Australian bio-ethical expert in 2009 to confirm that my initial conclusions that the ethical and legal components of organ donation were based on accurate interpretations of the law.

In sum, it will be shown that this research provides a number of methods for enhancing the standard of rigour by: ensuring participants lead the inquiry process; using the participants’ actual words in the proposed substantive theory; specifying the scope of the research in terms of the selection of the sample, setting, and level of theory produced; detailing how the literature relates to each category in the resultant theory; and successively memo-writing my personal research views along the way (Chiovitti & Piran, 2003).
3.5 Summary

In the absence of a robust model to allow a better understanding of physician practice of organ donor conversion, the need for qualitative, theory-building research is evident. The investigation proposed herein offers a unique opportunity to understand influencing factors identified in the literature and extensive interviews with ICU and ED physicians. As well as providing a platform for further enquiries, this research may facilitate the re-evaluation of organ donation procedures within hospitals and offer a conceptual framework upon which unit managers and administrators could structure organ retrievals within relevant units, thereby reaping the medical, economic, and social benefits that even the smallest increase to our organ donation rate would bestow.
Chapter Four: Operational Responsibilities in the Organ Donation

Conversion Process

4.1 Introduction

Organ donation is far from a straight-forward occurrence, as will be demonstrated by the complexity of the proposed model in this first analysis chapter. Issues surface at most junctions of the two pathways to donation, DBD and DCD. Some issues are inherent to both pathways, whilst others are unique to or more prominent for one particular donation pathway. These emergent issues are presented in the following chapters according to their prominence in three key categories: prioritising operational responsibilities (current chapter); determining ethics (chapter five); and seeking legal clarity and consistency (chapter six). Amid some overlap, it will be shown that these three categories broadly figure in an intensivist’s considerations and handling of potential donors.

The first section of this chapter provides detailed mapping of the process in question. While there are other organ donor process models available (e.g. NHMRC, 2007), few offer enough detail to simultaneously account for the decisions pertinent to both DBD and DCD. With the aim of depicting the true complexity of decision making required by the intensivist, the utility of a combined DBD and DCD process model is contrasted with one recommended by The Taskforce in 2008 (NCTOTD).

The second part of this chapter opens the discussion regarding intensivists’ operational responsibilities to convert potential organ donors. It will be shown that although the benefits of organ donation were undisputed by all interviewees, a
few disclosed how much organisational, psychological, emotional, and physical work is really involved. Typically withheld from the public, this effort must be considered when examining any organisational procedure asked of employees. If intensivists really are the “gatekeepers” in organ donation, how they perceive their operational responsibilities will undoubtedly have a significant bearing on how they subsequently behave.

4.2 Pathways to Conversion

When The Taskforce released their final report in 2008, they recommended the donation sector adopt an “ideal care path for critically ill patients who might be potential organ donors” (NCTOTD, 2008, p. 162). The suggested template was recommended for use by the ICU consultant/medical officer or Organ Donor Coordinator (ODC), to be used in conjunction with local procedures when deciding a patient’s medical suitability for donation, the timing of the NOK consent discussion, and referral to the AODR. Figure 4.1 displays the suggested pathway (page 162 of original document).
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Figure 4.1. National Taskforce’s Indicative Patient Flow from Emergency Departments and Intensive Care Units.

Presumably the template was intended to reduce confusion about the recommended order of procedures, however at certain junctures the diagram contradicts recommendations made in the supporting text. For instance, one of The Taskforce’s overall recommendations was that the AODR be accessed prior to approaching the family about the prospect of organ donation, yet the diagram implies the opposite order should occur. While its simplicity is appealing, the current findings reveal Figure 4.1 is too rudimentary to offer any practical utility in what are effectively two different and complex processes. While there is significant overlap, such as the decision to withdraw therapy being independent of organ donation, organ donation that occurs via DBD follows a very different path.
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than that necessary to facilitate DCD. Yet this summary diagram merges DBD and DCD and through omission, it erroneously implies that the order of proceedings and patient management is similar in both pathways. This is not reflected in practice. Hence, using findings from the current study, an alternate and more encompassing patient flow template is proposed in Figure 4.2 below.

Figure 4.2. DBD and DCD Pathways to Conversion
Unlike Figure 4.1, by distinguishing both DBD and DCD, Figure 4.2 allows closer inspection of the significant differences between the two possible pathways to donation. The most notable difference between the two pathways is that compared to DCD, death (brain death) in DBD is determined quite early in proceedings. After brain death has been determined, a patient’s family is invited to consider organ donation and, if they consent, patient treatment continues to be maintained up until the organ retrieval operation. In DCD, however, treatment is maintained until the decision to donate has been made, after which treatment is withdrawn and then death is determined. Therefore, physicians need to discuss organ donation with the NOK prior to death determination via cardiac criteria. The difference in practice means that intensivists have to make two sets of process decisions depending on the selected donation pathway. Thus, it is imperative that the sector receive more specific “templates” than that shown in Figure 4.1, otherwise the way in which an intensivist converts one particular donor will seem incongruent to his or her practice in converting another type of donor.

4.3 The Organ Donation Conversion Process: An Optional Extra

Figure 4.2 also informs how organ donation is not a straight-forward occurrence but “a logistic ordeal that takes many, many hours”. It requires a significant amount of strategic, organisational, physical, and emotional motivation and effort from everyone involved, more than is required for patients not identified as potential organ donors. Intensivists specifically, “need a fair bit of time to spend with the family in explaining and talking and helping but that’s a good thing”. Having pride in their ability to help others get through their darkest hour was one element of the donation process celebrated by all interviewees.
However, with this emotionally-laden work comes with inevitable strain. Thus, despite unanimous opinion that organ donation is “the only good that come[s] with very tragic situations” with “huge community benefit”, it is not always an easy task for the facilitating intensivist. One interviewee even likened it to a “double edged sword. It’s a pain, definitely a big pain in the arse”. They were not alone in their complaint about the two-sided nature of the donation process. Organ donation was sometimes thought of as a burdensome “extra”, meaning it can represent an additional responsibility in what is already a fairly demanding job description:

[I]t’s an extra . . . it’s exhausting emotionally for us talking about death all the time . . . if you’re sort of facilitating something and making it better for families, [it’s] quite rewarding but it’s exhausting emotionally. You add an extra layer of fucking exhaustion when you’re talking about donation and getting it to that process and then going, going, going. So it is a pain in the arse in one sense.

These words denote that supporting families through the emotionally charged death process can be taxing enough without having to uphold this support throughout the sometimes drawn-out donation process. Hence, reinforcing that there are two sides in the facilitation of organ donation: the rewarding, fulfilling, positive-out-of-tragedy component and the strenuous, emotionally draining, enduring component. Furthermore, unlike the frequency of death in ICU, organ donation occurs much less frequently and even then, it is not a certainty. Thus, although a physician cannot avoid the emotionally draining discussions of death
with the NOK, they could theoretically choose to avoid the equally draining organ donation discussions.

Aside from the emotional strain to the individual physician, there are also practical challenges to consider such as the increased resource pressure, which can: “devastate the hospital, in my unit for 48 hours”. There is no disputing the fact ICU staff must juggle their responsibility to the potential donor and their grieving family with the urgent needs of critically-ill patients and their families and these repercussions affect multiple shifts. This situation leads the same intensivist to bravely acknowledge that when initiating the conversation about the opportunity for donation with the NOK, occasionally:

You take a deep breath and [think] “oh god I hope they say no.” So that’s one of the things that’s not talked about because it sounds as if I'm just complaining about a bit of extra work, but it's not, it is a hell of a lot of work.

From the moment a potential donor is recognised, this intensivist cannot ignore the unappealingly large workload that will inevitably follow. NOK consent to organ donation signals additional personal and unit-wide labor that could be avoided if consent is not granted. Apparently, others share this view but do not speak about it at the risk of being labeled complainers. This is a plausible suggestion, when one considers how many doctors would feel confident to grumble about their personal workload when facilitating society’s most altruistic “gift”.


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Interestingly, other interviewees wholly refuted the suggestion that organ donation can be a resource burden. One intensivist called for colleagues to consider the bigger picture, in addition to pointing out the cost-effectiveness of donation:

They say “oh well what about the resources, we haven’t got the resources.” . . . if one in ten of them become a donor, one in ten, then the resources that they will save in terms of getting people off dialysis and out of hospitals and sick beds with hearts and goodness knows what, the resources they save are enormous.

By contrasting the short-term impact of a donor in one hospital unit to the much larger resource problem caused by society’s low donation rate, this intensivist was one of very few to reveal the hidden cost of not recognising the potential donors. The argument is compelling. Although few would disagree with the logic, it still does not account for the fact that dialysis patients are often some other unit’s or hospital’s problem. According to one intensivist, the unspoken but strenuous additional workload meant that some physicians, “well, they’re probably not going to do it on their lazy shifts”. So taxing is an intensivist’s role in organ donation, this interviewee suggested that during certain periods in the ICU, less motivated colleagues may conveniently neglect to identify potential donors or find reasons not to facilitate the possible conversion. This serious claim is, however, consistent with The Taskforce and The Authority’s proposition that the Australian hospital setting has the potential to improve deceased donor rates.

This proposition is further supported by another interviewee, who remarked, “I think that’s a little naïve” when informed that some interviewees had denied
their hospital could miss potential donors. Nonetheless, a clarification was quickly offered:

I think there are lots of potential donors missed. Very few real donors missed. Certainly from what I’ve seen in there. Although I’d like to say no, we never miss one, I think we do, usually because of people not recognising the opportunity . . . [or] because of a misperception, often on the part of the medical staff.

Despite preferring it was not their experience, this intensivist conceded numerous potential donors are being missed. Still, it was apparently unrealistic to assume that many of these potential donors might have eventuated as actual donors. Therefore, current conversion behaviour was justified, which raises more questions than it answers: such as why the need for justification? What differentiates a potential donor from a “real” donor and how can one know which patients would have become actual donors if their potential to do so was not supported? Why are donor opportunities not being recognised and what misperceptions are causing medical staff to miss these opportunities? The next two chapters are dedicated to answering these questions by exploring the misperceptions and inconsistencies preventing more donors being realised in two of Australia’s largest potential donor pools, the capital cities Melbourne (VIC) and Sydney, (NSW).

4.4 Summary

At the beginning of this introductory analysis chapter, a detailed organ donation conversion model was proposed (Figure 4.2). It was argued that this level of description was vital paramount to enable the current study to give much
needed insight not only into how potential donors are recognised but also the reasons why intensivists behave as they do once their patient is identified as a potential donor. This more accurate depiction of the conversion process may serve as the reference model the donation sector is currently lacking.

Despite universal agreement about the value of organ donation, this chapter also revealed that organ donation requires a significant amount of strategic, organisational, physical, and emotional effort from the family, ICU, and ED staff alike. Compared to patients not suitable for organ donation, potential donors create a considerable amount of extra work, in particular for the treating intensivist. Furthermore, while physicians cannot avoid managing death in their everyday practice, it is possible to avoid the “extra” work involved in organ donation by not raising the prospect or supporting the patient’s potential.

What makes organ donation particularly emotionally, psychologically, and physically taxing for physicians and the degree to which this effort could be minimised is revealed in the subsequent analyses chapters. Here it will be shown there is currently too much disagreement, misconception, and inconsistency amongst physicians about certain organ donation practices. While questioning and challenge are a natural and important part of any human quest and particularly of medicine, it will be argued that some of these uncertainties and inconsistencies in opinion, policy, and practice are significantly impacting the motivation, confidence, and ultimately, the behaviours of health professionals and subsequently, the families they are treating. This provides a better understanding as to why some interviewees felt the identification of a potential donor could be
met with a sigh or even as something to be discouraged, depending upon one’s current level of motivation and workplace demands.
Chapter Five: Determining Ethics

5.1 Introduction

In the previous chapter it was established that organ donation requires strategic, physical, emotional, and psychological effort from the treating intensivists. Some interviewees admitted that this can make their role in organ donation quite taxing at times. In this chapter, it will be argued that a substantial part of this effort stems from the intensivist’s determination of the ethics involved in every potential donor situation.

The first section of this chapter will show that, consistent with the literature, physicians define the suitability of their behaviour according to the therapeutic intent of their actions (or others' potential perceptions about the intention of medical treatment). Interviewees expressed clear ethical comfort when the treatment provided is solely intended for the benefit of their patient and the patient’s family. However, it “muddies the waters” substantially when it becomes unclear if anyone other than the patient and their family will benefit from the intensivist’s actions. It will become apparent why “upholding patient's best interests” constituted the core theme in the analysis.

Intensivists’ acceptance of their dual capacity as the treating intensivist and the person to discuss organ donation to the patient’s NOK will also be discussed. Many interviewees denied that this posed a conflict of interest in this context, given that they consistently determine the suitability of their actions according to the best interests of the patient and family. Discussed are inconsistencies about intensivists’ role in organ donation, both in theory and practice, including
interviewees’ paradoxical shunning of the recent initiative designed to relieve them of some responsibilities and bypass the conflict of interest issue. The first section concludes by summarising the possible implications this new initiative may have for intensivists’ conversion of potential organ donors, if indeed it is welcomed by the sector.

The ethical investigation continues in the two remaining chapter sections that explore the circumstances in which interviewees did recognise the potential to be caught in a conflict of interest. Two major ethical subthemes are presented: supporting potential donors, and navigating the “Grey Zone”. These complex subthemes are crucial in understanding intensivists’ conversion behaviour given each theme revealed many caveats in the donation procedure and the DCD process in particular. Interviewees cried foul if patients with futile outcomes were admitted to ICU to support their potential to become organ donors. Yet most interviewees were comfortable with admitting exactly the same patients to better manage their EoLC. Consequently, there were significant differences of opinion amongst interviewees as to whether organ donation should be considered part of an individual’s EoLC.

In the third and final section of this chapter, the ethical acceptability of DCD is discussed. While the reintroduction of DCD in Australia may relieve public frustrations through offering a broader donor pool, there are “major sticking points” preventing some hospitals’ uptake of DCD programs. These uncertainties, or areas of “grey”, concern the cardiac death donor criteria, the antemortem intervention “slippery slope” and the irreversibility of death in a potential DCD
donor. It will be argued that most current DCD protocols successfully mitigate these uncertainties but absolute certainty in medicine is impossible. Hence, despite the unavoidable need in DCD to broach organ donation before death has been determined, current protocols ensure the practice remains ethical and in the patient and family’s best interests.

The overarching aim of this chapter is to show that decoding the intensivist’s therapeutic intent behind organ donation procedures is paramount to understanding their motivation and confidence in actualising potential organ donors. Differences of opinion and practice inconsistencies emerged when the intensivists disagreed on what is in the best interests of the patient and particularly when the therapeutic intent guiding their actions was no longer for the sole benefit of the patient or their family. It will be argued that some interviewees’ interpretation of the patient’s best interest is unnecessarily narrow.

5.2 Upholding The “Best Interests” Standard: Physician Duty-Of-Care

As identified in the previous chapter, facilitating organ donation opportunities falls under the busy intensivist’s list of responsibilities. Thus, understanding intensivist’s motivation and confidence to actualise organ donors must begin with an examination of how they manage and prioritise this responsibility amongst their other job tasks.

Due to their position in the supply chain, intensivists did not deny their pivotal role in the delivery of organs to a society in need: “from a practical point of view, it’s something, as an ICU specialist . . . we’re meant to be aware of”. But
it is this intensivist’s word choice that provides some clues as to how, in practice, interviewees view organ donation. Organ donation represents an extra or option that intensivists are “meant to” or should consider - emphasising an element of obligation is involved. Another intensivist extends this sentiment:

There are lots of people who need organs and we are the major persons as a group in the hospital network whose responsibility is to see that whenever it’s appropriate, that organs are donated to the needy persons. As I said it’s a matter of routine questioning, however irksome it might be and however distressing for the parents, one really is obliged to ask the question.

While not all interviewees would agree with the perception that it can be distressing for the NOK to be asked about organ donation, many would agree there is inherent awkwardness in such an emotional situation. Nevertheless, this should and does not prevent an intensivist fulfilling their responsibility to raise the prospect of organ donation with a NOK. However, broaching the prospect of organ donation and prioritising organ donation amongst role responsibilities are completely different tasks. Although a few interviewees reported some problems with the former task, all showed great disdain for the latter. Thus, despite acknowledgement of their pivotal role in our organ donation system and no matter how pragmatic their general donation opinions, interviewees firmly opposed ranking organ donation amongst their top job priorities.

First and foremost, intensivists are highly skilled medical doctors, not organ donation advocates. They have studied and practiced the science and art of medicine, choosing to specialise in the critical care of gravely ill people. Their
code of ethics principle standard is to “consider first the well-being of your patient” (AMA, 2004 s1.1.a, p.1). Hence, interviewees stressed that their primary focus of care is looking after the patient’s best interests, whilst supporting the patient’s family. Their judgement is fitting considering successful solid organ donations generally transpire as a result of someone’s death (apart from some live transplants). Nonetheless, interviewees were acutely aware that their primary patient directive must be carefully managed with their capacity to support potential organ donors. Although their job descriptions say they can attend to both tasks, intensivists don’t believe it is appropriate to give both tasks equal attention:

The primary aim of therapy is to treat the child and their parents. Donation is a secondary aim. It so happens that the three things coincide but one can’t consider organ donation alone as the primary aim. We are not a donor factory.

Unlike an industrial production-line, where the priority is to turn out profit-making products, the ICU’s priority is not to produce donors (no matter how “profitable” that may be). Consequently, the current findings undeniably show that, day-to-day, organ donation only becomes an intensivist’s priority when the NOK decide they wish to pursue it. To order organ donation any other way was seen to jeopardise the duty-of-care to their patients and NOK.

Accordingly, some interviewees were angered by perceived pressure from others in the donation sector to re-examine their strongly-held “neutral stance” to organ donation. Despite the NODC’s apparent success and continued government funding, at least three interviewees expressed uncertainty about its overall intentions, as summarised by the following intensivist:
Best interest of family, patient and family. They’re the things we look after; and by the way, if they become organ donors, great, but that’s always got to be second, and I’m not sure in some cases it’s second.

As the profession advises, this intensivist uses the patient and family “best interest” compass to determine the ethical appropriateness of organ donation and their own subsequent behaviour. However, they believe others in the donation sector are not behaving as they should by insinuating that the conversion of organ donors should rank higher than it currently does on an intensivist’s to-do-list.

In no uncertain terms, an intensivist’s utmost duty is to their patient, not society’s problems or another specialist’s patient. Hence, the moment a physician’s actions benefit, or could be seen to benefit, anyone other than the patient and their family, the physician is on ethically shaky ground. To be anything but neutral when initiating the prospect of organ donation was therefore seen to be inconsistent with the essential “best interests of patient and family” standard.

5.2.1 Offer, Receive, but Never Request

Contrary to the literature, public perception, and published “request” rates, the need for neutrality explains why, in practice, intensivists do not request organ donation of the NOK. Rather, “we float the idea”. This is because the very act of “requesting” would imply a physician had a preference about that potential donation or indeed, organ donation in general. Yet at no time was it okay for physicians to let their personal donation opinions be known to the NOK. According to interviewees, such unprofessional behaviour was not tolerated in their ICUs. Consequently, intensivists report that they offer the NOK the
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opportunity to donate, in a delicate discussion that cannot be overly prescriptive:
“It is not a cooking recipe. It’s a dish you make up according to the
circumstances; it’s nonetheless a very fine tuned concoction.” Indeed, as long as
the NOK were left with a neutral aftertaste, interviewees remained confident in
raising the opportunity of organ donation by tailoring the discussion to every
circumstance.

While this well-supported neutral donation stance is taken to the extreme in
the following excerpt, it clearly illustrates the intensivist’s duty-of-care priorities
to immediate patients and their families:

[T]he end gain quite frankly for me is not the donation rates or the consent
rates, as long as it’s something that the [patient’s] family feels comfortable
with, and that is well and truly their decision on behalf of the [deceased]
person, then that’s fine. If because of something the consent rate goes to
zero . . . I don’t have a problem. If that’s what the community wants,
that’s what the family wants.

The final sentence of the passage allows understanding of how the intensivist
justifies their neutral donation behaviour. Like many health professionals, they see
their role as being to serve the community and to enact agreed standards, not to
challenge these standards or promote one’s own. To guide practice, they draw
upon the treating families as if they are representatives of the community-agreed
standards. Therefore, confidently stating they would be comfortable with a low
consent rate, if this was a true indication of what their community wants. This
poses a question: In spite of first-hand experience of treating patients with end-
stage organ failure, does maintaining this impartial, community-derived attitude
lead intensivists to relinquish some of the responsibility to convert potential
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Converting donors into actual donors? Possibly, but still it is simplistic to assume that intensivists’ neutral donation stance is a potential barrier to increasing conversion rates. After all, families expect their doctor to look after their own needs and would perceive any “pushing” for donation as unprofessional and unethical while also threatening public donation support rates.

One way a physician can avoid the potential perception of pushing for organ donation and remain dedicated to their patient’s best interests, is for the NOK to initiate the prospect of organ donation when the situation arises. According to ANZOD statistics (2007; 2008; 2009; 2010), organ donation was volunteered by the family in 36 per cent of successful donor cases in 2009, which was up from the 32 and 22 per cent volunteer rates in 2008 and 2006 respectively, but similar to the 37 per cent rate recorded in 2007. This is inline with interviewees’ claim that families are more frequently initiating the possibility of organ donation, sometimes prematurely or in unsuitable contexts, “[b]ut when it is appropriate then it makes life incredibly easy for us”.

There is also the added benefit when a NOK initiates the discussion of organ donation, a physician’s therapeutic intent is less likely to be questioned. Effectively, “that would take a lot of heat off a lot of people” as physicians are no longer the trusted professional to suggest the NOK might want to consider helping others in their darkest hour. In other words, there is the potential of being perceived as acting out-of-line with their patient and family’s best interests because a third party’s interests are suddenly being considered. Not to mention how taxing it must be to be constantly mindful of one’s behaviour and the
potential for liability. Therefore, it is little wonder it “changes the ball game if the family brings it up, and changes the ethics and the morals of the situation quite substantially.” The moment the NOK initiates interest in organ donation, organ donation can be considered compatible with the patient and family’s best interests and physicians are less likely of being accused of having a conflict of interest.

5.2.2 Avoiding The Conflict of Interest – Perceived or Real?

If on-duty intensivists do not promote or advocate organ donation, they believe they can avoid posing a potential conflict of interest. According to interviewees’ logic, their patient’s and NOK’s best interests are their only imperative, hence maintaining a “neutral” donation stance assists them to facilitate the conversion of potential organ donors without creating a conflict of interest. The following extract is representative of the interviewed sample:

I think that because of the way we operate . . . I think everything we do is really designed to sideline that conflict of interest as much as we can. You know we don’t confront one issue until we’ve cleared the other. And so I don’t think the conflict issue is a big thing for us.

Like others, this intensivist employs preventive practices that are designed to minimise the potential for a conflict of interest. Recall, for instance, the well-documented demarcation procedure that suggests physicians should not inform NOK of their loved one’s brain death in the same discussion as broaching organ donation, otherwise “if you bring it in earlier than that it’s very confusing for families, they wonder who you’re treating”. Thus, although the same cannot be said for DCD (a point that will be returned to in the upcoming sections),
Interviewees protested it is not intensivists who perceive a conflict of interest but rather others in the donation sector:

[T]hey reckon . . . that the public sees a conflict of interest . . . we don’t see a conflict of interest but the businessmen do. I can’t see what the bloody conflict of interest is . . . I think that totally misconstrues the whole thing.

According to this interviewee, the very suggestion of a conflict of interest misinterprets the overarching cause of organ donation. That is, organ transplantation is seen as a secondary benefit to the donation process. The first and most important reason for organ donation is to offer bereaved families some positive out of their tragedy. Therefore, it is believed that organ donation can be in a family’s best interests if it is one of their wishes and may even aid their emotional and psychological adjustment to their loved one’s death. While these arguments have great merit and the literature to support them, this intensivist fails to recognise that regardless of their ability to separate physician tasks from the one to broach organ donation, if members of the public (including the businessmen who make up pro-donation organisations) perceive a conflict of interest, then it does matter to them. Hence, it may be having an effect on Australia’s consent rates, given that the public is where donations come from. Furthermore, if intensivists’ desire to avoid a conflict of interest is so strong, it must impact their capacity to support the organ donation cause and, therefore, their day-to-day conversion behaviour.

Given our understanding of human motivation and accomplishment, it appears organ donation advocates and government bodies have recognised there is a
problem if our “gatekeepers” to donation are unable or unwilling to raise it on their list of priorities. Cue The Authority’s introduction of another hospital-based professional, whose role is to offer and manage the donation process, thereby side-stepping the potential conflict of interest issue being perceived by intensivists. Such an initiative means that the treating intensivist would manage the active care of the patient until such time as the patient becomes a potential donor. At that point, a different specialist would assume management.

These recent changes to the Australian donation sector can be evidenced in the pink text in Figure 5.1, which is a social worlds/arenas map. According to Situational Analysis, a social worlds/arenas map allows a meso-level interpretation of the situation through the visual delineation of the collective actors (e.g. organised social action groups such as ICU physicians, transplant recipients), key non-human elements (e.g. the AODR, ICD-10 guidelines) and the arenas of commitment within which they are engaged in ongoing negotiations (represented by the dotted lines) (Clarke, 2003; 2005). Each social world is represented by its circular but porous boundaries and some overlap, demonstrating that certain people (e.g. ICU physicians) and their collective groups (e.g. professional societies such as ANZICS) are participating in more than one social world. This is also the case for social worlds, groups or non-human elements (e.g. the ICD-10) that participate in more arenas than just the Australian solid organ donation arena (Clarke, 2005a).
Although interviewees categorically preferred it when the NOK initiates the possibility of organ donation, they did not support this alternative of introducing specific organ donation hospital medical directors. Dissenters reasoned that removing the broaching and management of organ donation from their current job responsibilities would equate to abandoning a family when they are most in need, by severing the rapport, communication, and trust that had been built up over a number of hours or days. This was perceived to be asking the physician to forsake their continuity of care and, more importantly, abandoning their patient/family's
best interests standard. Hence, it was not surprising that some intensivists interviewed want to extend this level of care beyond the patient’s death, as expressed by the following interviewee:

I’d feel terrible if [I wasn’t the one to broach the donation discussion], I don’t see it makes any sense . . . Because we have an engagement philosophy, because we do believe very strongly in the communication with families and we carry it through . . . it’s not just talking, this isn’t just baby talk. I think we really do it. That other way of managing it doesn’t make any sense and the conflict of interest stuff is just bullshit in that sort of a context.

This intensivist clearly resents the notion that treating a patient and offering their NOK the option to donate is a conflict of interest. Furthermore, they are actually offended by the mere suggestion, perceiving their professionalism to be unduly questioned.

This was consistent with the finding that interviewees showed great pride in their planning and ability to communicate complex concepts and emotionally sensitive information to vulnerable NOK. No matter how “irksome” raising organ donation with a grieving family may be, interviewees reasoned that it was their responsibility and part of their duty-of-care. Therefore, instead of posing a conflict of interest that could damage donation consent levels, some intensivists perceived handling the “offering” process was their responsibility and may actually increase consents levels:

It is my impression and belief that you’re going to be much more successful in negotiations with family when you have been taking a lead role in walking them through each stage of their loved one’s illness. So
explaining what you’re doing and what you hope to achieve and what you’re worried might happen and planting those seeds. If you’ve got time, and sometimes you don’t have time, to walk people through a stepwise process over a couple of days, it is very useful. If the one person can speak to the family, it’s very helpful.

This extract also introduces an additional important point in the debate—the notion of time. Intensivists are busy, highly-specialised, and therefore, highly sought-after in the ICU. They have numerous responsibilities to manage, with facilitating potential organ donation opportunities being just one of them. While the organ retrieval process may indeed be rapid, interviewees emphasised the importance of fostering a much slower-pace when grief-stricken families are asked to decide the fate of their loved one’s organs. Hence, in addition to the reduction of labour it may provide, there was some interviewee in support of the proposed initiative:

I’m sure the processes will become better. I know if I have somebody who is dying and an organ donor at the moment, and I’m on the floor, it takes me, as the specialist, away from the floor from looking after the other patients for at least six hours or eight hours, which is almost the entire day, ‘cause it is very time consuming. So if there’s a person who’s dedicated to that and who takes over that role, then it’s probably going to be easier to look after the other patients firstly, and secondly might even make the family feel better. I think this concept of conflict, which the families seem to perceive may be real, and it might well be that if somebody else comes they may view it differently.
At the time of writing, dedicated hospital specialists destined to manage potential organ donors had commenced their new positions in some regions across Australia. Until the performance data is available, it is difficult to comment on the likelihood it will reduce the conflict of interest perceived by some parts of the community. The separation of roles may offer specific benefits to the DCD program, given that the prospect of organ donation must be raised before cardiac death can be declared. Thus, compared to families of brain dead donors, families of cardiac death donors may be more likely to be unsure of where the treating physician’s motivation lies.

Given that physicians claim the initiative may cause a departure from their patient/family best interest standard by abandoning the family when they are most in need of a trusted face, The Authority’s initiative’s timely introduction with the re-birth of DCD in Australia suggests more than just the public will be protected. Reducing the potential for conflicts of interest in medical practice will also protect physicians, hospitals, and governments from bad press and litigation, and the likely damage to public support rates and Australia’s organ donation program that might otherwise occur.

It will also be interesting to see how the initiative is received by those intensivists who would rather not hand over their responsibility to another professional. After all, whoever deals with the NOK presumably will also be expected to consider the patient and family’s best interests to prevent unethical practice. This initiative may effectively be repositioning a set of issues from one professional to another.

Finally, there is the possibility that the dedicated specialist may be introduced too late in the process to really capitalise on the potential donor pool. As is
revealed in the next section, where some interviewees deemed it unethical to transfer terminal patients to the ICU in order to support their potential to become organ donors.

5.3 Supporting the Potential: Is Organ Donation part of End of Life Care?

As detailed in Figure 4.2, it is common practice in major Australian hospitals for ED patients to be transferred to the ICU to better manage their EoLC, yet international research hints of growing concerns about ICUs are being used inappropriately as hospices (Sharma, Freeman, Zhang & Goodwin, 2008). While this debate is out of the current dissertation’s scope, it should be briefly acknowledged. Opponents say it is a waste of resources to admit terminal patients for palliative care. Yet the current findings reveal the majority of ICU and ED interviewees were comfortable with admitting patients to the ICU for the main purpose of providing EoLC. Their claim being that the ICU is a better environment than the ED for time-consuming medical and nursing interventions designed to make the dying patient more comfortable. Many also highlighted the importance of providing the family with an environment that is equally appropriate for their comfort in such a distressing situation, which allows time and privacy to adjust to the dire prognosis. Such requirements may not always be met in the ED or on the ward.

Transferring mechanically-ventilated patients from ED to the ICU means the staff are not just standing by doing nothing, which must be a difficult task for a physician when faced with distraught family members. The simple act of transferring patients provides staff with a further opportunity to enact their best
interested duty-of-care to the shocked family; “it’s a smoother process for everyone then when you do withdraw life support, rather than letting someone die on the ward”. While the interviewee acknowledged advantages for “everyone” involved, they go on to point out that it may not be strictly advantageous for the patient, who may in fact be having their life prolonged:

[W]e do take patients to the intensive care unit knowing that they’re not going to survive and it’s not, if you like, necessarily in the patient’s best interest to have done it, but it helps smooth the process over, so I guess you could apply the same thinking when you’re in the end of life and you’re considering organ donation. But that’s really the only tricky, ethical issue as to whether you should admit [the patient in to the ICU] and continue giving intensive care support, when you realise that the outcome is going to be death; right from the beginning.

Although most interviewees often pointed out keeping a dying patient alive may not be regarded as being in the patient’s “best interest”, they also recognised that it may be within a patient’s interests to have their family’s needs attended to. After all, admitting a patient with futile outcomes to the ICU affords the NOK the preferred environment to learn of, and adjust to, their loved one’s imminent death. Hence, interviewees now have an ethically justifiable reason for extending the treatment of patients with no chance of recovery. The family’s emotional and psychological best interests are prioritised above what might be a patient’s medical best interests.

Conversely, interviewees did not believe it was in the patient and NOK’s best interests to admit the same terminal patients to the ICU for the sole purpose of organ donation. Nor did many believe that the prospect of organ donation should
be considered as part of EoLC. Some claimed that as organ donation does not occur during the patient’s life, it is a contradiction in terms to regard it as part of EoLC and admit potential donors into the ICU under that proviso. Although a few interviewees acknowledged the continuance of therapy may well be considered in the best interests of those patients with pre-registered consents, this consent was not considered enough to mitigate the subsequent ethical issues. Indeed, the following extract represents the majority of interviewees who draw a definite distinction between ICU admissions for EoLC and ICU admissions for certain death and organ donation:

We orchestrate death in the ICU. We allow time for people to get used to it, for family members to get – we do orchestrate it. And one might say that’s not strictly in the patient’s interest once you’ve decided to withdraw care . . . But we do it because, I guess, at the very least, there’s a perception if the patient was alive, if it was felt that it would help the grieving process of the family, they would be quite happy to be kept alive just a bit longer so that everyone could get there. So you could justify it. I still think that’s different from orchestrating things for someone else who’s totally unrelated to the patient.

In other words, continuation of therapy (or non-therapeutic ventilation) is only ethically justifiable if the patient or family may stand to benefit from it (emotionally or psychologically), but the same patient management is not considered ethically justifiable if a third party may prosper from it through organ transplantation. Another interviewee related the process to “hunting with the hounds and the horses if you like . . . you can’t go on two horses at the same time”. In fact, the current findings clearly indicated that the admission of terminal
patients (i.e. potential donors) to the ICU for the sole purpose of becoming organ donors was deemed unethical:

I don’t actually agree with that concept [of maintaining therapy] and I don’t think any of my other colleagues do either, we think that’s [a] disingenuous mode of action to do something in a two faced way, with or without the parents knowledge . . . [the] guiding principle in this circumstance is that if a child was obviously dead the right thing to do is to stop the treatment. If at that point the parents agree for organ donation, so be it, but if the child is in the process of dying it’s immoral and unethical to maintain life-support treatment with the mere prospect of obtaining organs.

Notwithstanding a patient’s registration of consent or full disclosure to the NOK, interviewees insisted that the therapeutic intent behind the continuance of the patient’s “life support” is to provide the family with the most appropriate environment for death, not to permit organ donation. Interviewees were therefore comfortable making an assumption that the NOK’s emotional needs were in-line with a patient’s best interests, but not that organ donation was.

5.3.1 The Rejection of Non-therapeutic Ventilation

Regardless of supposedly legally valid donation consent, non-therapeutic ventilation in the dying potential organ donor was considered ethically unjustifiable to oneself, one’s colleagues, and the community. This was why most interviewees were definite that potential donor transfers to the ICU were only acceptable after the patient had been declared brain dead:
We certainly don’t object to that as long as we feel, A, we’ve already got agreement to donate and, B, if someone is already brain dead then that’s fine because we know it will happen soon. So in principal we have no issue with that unless of course we’re full or it’s our last ICU bed, and then it becomes an issue.

When transferring patients to the ICU for the purpose of organ donation, this intensivist outlined two theoretical conditions followed by a practical one. Firstly, donation consent must have been obtained; secondly, the patient is already brain dead, and finally, there must be sufficient ICU bed resources. For this intensivist, gaining the NOK’s consent for donation prior to the ICU transfer is crucial. It means that the family are well informed that the patient is being transferred for no other reason than the possibility of donation. They are not given false hope. Thus, the potential for conflict of interest is lessened because the physician is acting in line with the family’s wishes; there is no hidden agenda. Therefore, it seems informed consent can powerfully mitigate a physician’s strict organ donation protocols, which are designed to avoid a conflict of interest. The influence of informed consent is a theme that will be returned to throughout the remainder of the dissertation.

Returning to the above extract, condition “B” relates to the transference of brain dead patients only. This condition is imperative to interviewees for a number of ethics-based reasons. Apart from one interviewee, all stated that meeting this condition ensures the transfer and continuance of care remains ethically appropriate. Given the patient has already been declared dead, the potential for conflict of interest is diminished because the intensivist cannot be
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accused of manipulating a patient’s death in order to convert the potential donor into an actual one. The physician’s therapeutic intent remains transparent.

Additionally, if death has been declared, then the organ retrieval operation should be imminent. All interviewees expressed great unease about maintaining futile treatment for lengthy or indefinite periods of time, as they felt this robs patients of a dignified death. Dying can be an inexact process, particularly when brain death is the cause of death. Interviewees acknowledged this uncertainty and used it to justify the ethical extension of treatment for certain NOK to make it to the patient’s bedside, compared to what was perceived as the unethical treatment extension for organ donation.

In other words, interviewees believed it was justifiable to maintain mechanical ventilation for interstate relatives but not to allow brain death and subsequent organ donation to occur. Their reasoning relates directly back to their ethical compass; i.e., it would be in the best interests of the patient and their family if that special interstate relative had the opportunity to say goodbye. In contrast, many interviews assert it would not be in the patient’s best interests to prolong their life for those unknown transplant recipients, even with known patient or NOK donation consent. Bearing in mind humans are better at predicting plane arrivals than brain death, the logic seems plausible but it is still based on assumption. Hence why one intensivist rejected this reasoning, declaring it may be more unethical to deny a dying patient’s known wish to donate by not admitting them to the ICU, as demonstrated by the satirical response when asked if their reasoning still applies when there was only one ICU bed left:
Yeah, yeah, yeah, I know, there’s always only one bed left. [P]eople say . . . I can’t bring people up here just for that purpose, that’s unethical. And I say, well hang on a tick, if they wanted to be a donor and you’re stopping them being a donor . . . if you don’t bring them up [to the ICU] aren’t you denying them their wishes? So how do you see that as being anything but unethical?

By pointing out the established value of managing patients’ EoLC in ICU, this intensivist rejects the notion that the ICU bed clause should be a factor in supporting potential organ donors. Moreover, they were the only interviewee to point out that looking after a patient’s best interests should extend further than just considering their physiological wellbeing.

In this context, interviewees’ narrow interpretation of the patient/family best interests’ ethical standard is unfortunate. While physicians are comfortable attending to their patient’s physical best interests, they are less so with their patient’s emotional, psychological, and spiritual best interests, except when these are consistent with the NOK’s. Thus, in a further bid to avoid, or at least minimise, the potential conflicts of interest intensivists may pose families in their dual capacity as the treating doctor and facilitator of organ donation, organ donation is not considered part of EoLC. However, the physicians with narrow EoLC interpretations are resisting the inevitable. The manner in which DCD occurs forces organ donation to be considered as part of one’s EoLC because of the time frame in which treatment is withdrawn and death is declared. Patients’ NOK consent to DCD prior to death declaration, not afterwards, as is possible in DBD.
Finally, despite a number of valid consent registers being available to relieve patients’ families and physicians from the pressure of guessing an individual’s best interests, their practical utility remains low. This finding will be explored in chapter six, as it is now appropriate to explore what has been done to address some physicians’ stern reluctance to consider organ donation as part of EoLC practices.

5.3.2 The Call for Clinical Triggers in ED

In the previous section, it was shown that the admission of dying patients to the ICU for the sole purpose of organ donation was considered unethical. This finding is further evidenced by those interviewees who specifically rejected the notion that Category C patients are indeed realistic donors (Opdam and Silvester (2006) defined Category C patients as those with the potential to progress to brain death within 24 hours if supportive treatment were continued). Some interviewees suggested that unconverted potential donors may predominantly be Category C patients:

I don’t believe that we miss any appropriate donors who are in the intensive care unit, and again, the figures that Helen Opdam produces would suggest that you might increase your [donor] pool if you took severely brain injured people up from the emergency department with a poor prognosis, but I don’t really think they’re true misses, that requires a societal shift in thinking.

Given these findings support the notion that severely damaged neurological patients may have their active care withdrawn before brain death would have occurred, a shift in societal thinking may well increase conversion rates. In fact,
the advent of clinical triggers in the ED appears to be one of the ways The Authority intends to spearhead such a shift. Aimed at improving the recognition and flow of potential donors and dying patients from ED to ICU, programs utilising the acronym such as GIVE had been, or were due to be implemented during this study’s data collection (acronym stands for: G = low and descending Glasgow Coma Scale (GCS), I = intubated, V = ventilated, E = extubation).

While clinical triggers undoubtedly offer promising outcomes for recognising potential donors, these findings suggest it may be some time before ED physicians and intensivists feel ethically comfortable, and legally secure, about maintaining the potential donor under these circumstances. The hesitation for clinical triggers supports some findings previously released by NODC (NHMRC, 2009b), and is perhaps best summarised by the intensivist who said: “let’s just keep him going in case he could be a donor tomorrow. Nobody says that but that’s the truth of what probably happens and you know, I wouldn’t subscribe to that at all.” This intensivist believed that the mere prospect of non-therapeutic ventilation in not-yet-brain-dead patients makes physicians so ethically uncomfortable that they could not be honest about the practice. But is there more to this popular objection than an ethical discomfort about interfering with a patient’s right to a “dignified” death? When explicitly broached, what was identified was another possible deterrent to maintaining non-therapeutic ventilation; the danger that brain death may not ever occur:

The other . . . possibility is that if you allow these people to have non-therapeutic ventilation, is that they may not die, and they end up being in a vegetative state. Now, is that harming a patient? Now, they may be, by
definition, being in a vegetative state, they’re not suffering because there is no awareness. But most people, including myself . . . would worry . . . that could happen to me . . . end up in a vegetative state, I’d rather be dead. So that’s a harm, a potential harm, to me, you know. So it depends on how you define harm.

It seems the possibilities of negative consequences in non-therapeutic ventilation are multifold. Should brain death fail to eventuate, the patient may be stuck in a vegetative state, which is an existence this intensivist described as a state worse than death. Moreover, the treating intensivists could feel they caused, or at least contributed, to this event—a forbidding prospect for any individual’s conscience, not withstanding those whose ethical code specifies: “where death is imminent and curative or life-prolong treatment appears to be futile, try to ensure that death occurs with dignity and comfort” (AMA, 2004).

Herein lays another potential conversion barrier if intensivists feel at all uneasy about some aspects of the management required to facilitate more donations via brain death. Thus, an alternative to waiting for brain death to possibly occur was identified. This precipitated the recent re-introduction of DCD in some major Australian hospitals. Unlike DBD, where passive therapy is maintained to ensure brain death has or will occur (see Figure 4.2), therapy is withdrawn in DCD. Thus, the period of non-therapeutic ventilation in DCD should theoretically be less than that necessary in DBD. Yet only one interviewee acknowledged this potential merit. Instead, most interviewees expressed a greater unease with the unavoidable situation where organ donation must be raised with the NOK prior to cardiac death being determined. In turn, this meant that the
therapeutic intent behind subsequent DCD practices have an increased potential for a conflict of interest, compared to DBD. The next section is dedicated to exploring these issues as well as the potential benefits offerings of DCD.

5.4 Donation after Cardiac Death: Navigating the “Grey Zone”

It was not surprising that the advent of DCD was defined by many interviewees as a necessity, given their strong opposition to non-therapeutic ventilation in dying neurological patients intended for donation. The topic of DCD consumed a major proportion of all discussions with intensivists and ED physicians alike. Reasons for this are offered in the following extract from an intensivist whose hospital had implemented DCD:

It’s a hot topic because we feel the need and there’s pressure on us to increase the number of donations or the number of donated organs. And DCD is, apart from making sure you never miss a brain dead donor and you don’t stuff up the organs so they’re actually in good condition, the only other thing we can do is to increase DCDs.

Unlike most interviewees, this intensivist acknowledges a pressure to increase donations and the possibility of missing potential, brain dead donors. However, like others, it is contended that there is little intensivists can do to increase the donation rate—other than to pursue DCD. But DCD offers more than just improved access to a previously inaccessible organ pool. It offers families another opportunity to fulfil their own, or their loved one’s, wishes to donate, where brain death is not a likely outcome (at least not in the short-term). In fact, a number of intensivists claim it was families and the community who initiated DCD’s rebirth in Australia due to dissatisfaction with unreasonable suitability criteria:
Some families are very frustrated by the fact that they can’t donate organs, to the point where a particularly articulate family recently said “are you telling me that because he’s not brain dead, but he’s dying and he’s going to die, that he can’t donate organs, but yet if there was no blood flowing through his brain he could?” The answer to that at that stage is “yes”. So he says “that’s ridiculous. That’s just stupid”.

This pediatric intensivist illustrates how DCD now provides a mechanism to avoid potentially frustrating situations, where families wish to donate their loved one’s organs but they are told it cannot lawfully be done because the patient is not brain dead. By assuming the family’s perspective in this situation, this intensivist was one of few to explicitly highlight the potential benefits DCD may afford frustrated families.

Nevertheless, there was a varying but definite degree of reluctance and ethical discomfort perceived by all physicians about DCD. This was evidenced by a paediatric intensivist whose hospital was yet to implement DCD:

I mean everyone you speak to will have a standard answer for [DBD], like I probably have. Whereas if you’re asking about non-beating heart, non-brain death donation, then that’s really quite complex. How we feel about that and how we think it’s going to be worked through and how it’s going to work out. That is quite hard.

As documented in American qualitative physician research (Mandell et al., 2006), many interviewees made reference to complex, “grey areas” they believe are more inherent to DCD than its counterpart. An attempt to represent these varying degrees of acceptance can be found in Figure 5.2, which is a positional
map (Clarke, 2005a). Represented on the X axis are the positions interviewees broadly assumed regarding the theoretical acceptance of DCD and represented on the Y axis are their positions regarding their comfort for operational aspects of DCD. A novel offering of Clarke’s methodology is that these positions are not necessarily static and may change for both between and within each interviewee, depending on the context and on the patient.

As evidenced in this positional map, there were three general positions held by interviewees at the time of interview. The most commonly assumed positions were the high (position A) to moderate acceptance (position B) of DCD in theory. That said, both positions still represent definite concerns about its practical application. Interviewees whose hospital was yet to implement DCD were more likely to maintain position C at the time of interview.
Following Clarke’s (2005a) reasoning, this positional map also permits the silences to “speak”. For example, it is clear that no interviewees highly supported both DCD in theory and in practice simultaneously, nor did they strongly reject DCD in theory and practice. The silences also indicate that at the time of interview, no one reported a high acceptance for the operational aspects of the DCD process. Even those who had no qualms with the theory underpinning DCD reported some procedural concerns across a variety of situations.

Figure 5.3 outlines the specific difficulties interviewees identified in a DCD program. The DCD procedure is depicted on the left side. The right side demonstrates the major issues in order of their emergence in the DCD process. The issues are also colour classified into two types: whether they are issues specific to DCD (yellow) or they pertain to both DBD and DCD (blue).
Intubated patient with low GCS and irreversible brain injury. Therapy withdrawal being considered.

- ED call for ICU review prior to extubation
- ICU review and acceptance of ED patient for EoLC
- ICU initiates family discussion about prognosis and transfer to EoLC.
- ICU review of clinical indicators of imminent brain death: Maastricht Category 3 (or rarely 4). Withdraw of cardio-respiratory support has been decided.
- ICU contacts state-based OIDA for AODR information and review of medical suitability
- ICU MO and/or ODC initiates family discussion about OD
- Family consent and support processes

If not proceeding to organ donation, limitation of therapy when indicated
- If OD is proceeding, therapy is withdrawn pending death in 60-90 mins. Transfer to/oear theatre
- Death does not occur in specified time frame. Patient returns to ward
- ICU declaration of death via circulatory criteria.

**Figure 5.3. Issues Arising from DCD Procedures**

**Issues found in DBD and DCD**

**Issues specific to DCD**

OD = Organ Donation, DCD = Donation after Cardiac Death, DBD = Donation after Brain Death, ICU = Intensive Care Unit, ED = Emergency Department, OTDA = Organ and Tissue Donation Agency, ODC = Organ Donation Co-ordinator, AODR = Australian Organ Donation Registry, NOK = Next of Kin (family), ICU MO = Intensive Care Unit Medical Officer, EoLC = End of Life Care
Two of the issues that are specific to DCD (yellow-coloured): “heart transplantation” and “indignity of the withdrawal and retrieval process” will not be discussed in this paper given they were not strongly evidenced in the current dataset. This is not to say they are not worthy of further inquiry. However, only those most salient to interviewees are addressed in the subsequent sections, beginning with some discussion regarding the recently introduced donor pool.

5.4.1 The Maastricht Categories: Introducing a New Potential Donor

The current findings revealed consistency with the international acceptance of the DCD Maastricht Categories and, specifically, with Australia’s adherence to Category three & four in local DCD protocols. As one intensivist explained, “the cleanest, easiest way to do” DCD is only to allow patients who have a “profound brain injury that’s not brain dead” to be recognised as potential donors. Hence, by only considering patients who meet Category three or four, more stringent ethical boundaries keep physicians from straying too far into the “grey zone” of DCD and public distrust. This sentiment is well captured by an intensivist with DCD experience:

[Y]ou have to have that demarcation where . . . either somebody’s brain dead or they’re not brain dead and either they’re not survivable or they are survivable . . . So you’re either treating or you’re not treating invasively and when you cross the bench where you say look this is not survivable, we’re going to remove invasive support but they’re not brain dead, you then say well, would they be suitable for DCD? And it’s that stepping over those boundaries if you like makes it doable. Once you dissolve the boundaries it gets less and less doable in my opinion.
Each step described above represents an ethical boundary the physician uses to guide their own practice of organ donation and specifically DCD. The fewer boundaries in place, the more ethically difficult they find DCD and the more at risk of creating a conflict of interest.

Other interviewees were willing to consider loosening current DCD boundaries so to include other withdrawal-controlled patients (Category three) such as those with high spinal cord injuries, who could only survive in a vegetative state or be very profoundly neurologically impaired. This was providing, of course, that the decision to withdraw treatment on the basis of futility had already been made, independent to organ donation. Through treatment withdrawal and subsequent DCD, these physicians believe they will be acting in line with the patient’s medical, emotional, psychological, and spiritual well-being. One intensivist was willing to push the potential DCD donor boundaries further still:

[A] patient who was quadriplegic, ventilated and dependent quadriplegic, but otherwise completely awake, alert and rational. And the patient said I do not want to live with this disability, I want you to turn my ventilator off and let me die and I want to be an organ donor. You know, I want to donate my organs. Now there’s no way you can do that except through the DCD thing. But how could you look that guy in the face and say no, piss off, I’ve got a conflict of interest, I’ve got an ethical problem with this. How can you look him in the face and say no you can’t do it because of something in me?

By arguing that the ethical boundaries of organ donation should involve further flexibility, this intensivist inadvertently raises the controversial Euthanasia
debate. He also emphasised the difficulty in refusing a fully-conscious, yet dependent quadriplegic’s consent to death and subsequent organ donation, based on a doctor’s personal ethics. So while DCD opens the door to new potential donor possibilities, just how wide that door may open made most interviewees very wary. Likewise, any discussion about extending the current DCD boundaries beyond Categories three & four raised immediate ethical concerns for the public perception of DCD.

Interviewees felt that pushing the ethical boundaries of DCD too far and fast may paradoxically damage community support levels and the new potential donor pool. Given the opportunity for misconceptions amongst the public described in chapter two, these concerns seem realistic. Many interviewees illustrated this point by comparing the medical sector’s awareness of DCD procedures to that of the general public’s, claiming there is too great an education gap between physicians and the public:

[T]here has to be much more...public education...I mean you come in with chest pain and you have a cardiac arrest, you die, the next thing you're being organ donated. I don’t know . . . if the community is even aware that that process could unfold.

At the time of interview, this ED physician was employed in a hospital that had implemented DCD about 18 months previously and was unaware of acceptable Maastricht donor types. That withstanding, like most interviewees, the ED doctor did not believe the public was ready for patients without serious neurological damage to be considered potential DCD donors. Of concern is that this observation appears to be in direct conflict with the earlier observation that it is the public who are driving the expansion of the potential organ donor criteria to
include DCD. It was furthermore ironic that some physicians thought DCD may be better understood and supported by the general public given that the definition of cardiac death is more synonymous with all previous cultural notions of dying than brain death is.

Such anomalies appear to reveal the core reason for physicians’ wariness of DCD and their faithful adherence to Maastricht Categories three and four. One of the concerns about DCD is not simply that its procedures are inherently unethical, but rather that performing these procedures on an ill-informed public is unethical. After all, physicians rely on community standards to determine and guide the ethics of their professional behaviour. Thus, it seems that until the community is better educated about DCD and the advancements it may offer, interviewees are more ethically comfortable if the new potential donor pool remains restricted to Maastricht Categories three and four. This would appear to be a wise course of action until public discourse about DCD is increased. In the next section, interviewees’ perception of the deficit in the community’s donation awareness is further examined in relation to a particularly controversial, “grey area” of DCD: antemortem interventions.

5.4.2 The Slippery Slope: Antemortem Interventions

While interviewees readily acknowledged the potential increased organ access via DCD, some were wary about the transplantable quality of the organs retrieved. This was well captured by an intensivist whose hospital had implemented DCD over 12 months ago: “DCD for me is... the sort of poor second cousin to brain
death”. His reasoning that DCD is somehow inferior to DBD, like others, is directed at the manner in which DCD occurs.

Through the withdrawal of therapy, DCD may effectively side-step the unpopular, unethical, non-therapeutic ventilation issue hindering more brain dead donations, but consistent to the literature, some interviewees believe this comes at a significant cost to organ vitality and function (Bell, 2003; Mandell et al., 2006; Reich et al., 2009; Truog & Miller, 2008). Thus, to counteract potential ischemic damage to organs, a case for antemortem interventions has been argued (Rogers & Richards, 2008). However, apart from specific scenarios detailed below, this particular sample opposed most forms of antemortem intervention in DCD. Unlike blood collection, which must be taken from the patient prior to death in order to cross match potential recipients, most intensivists convincingly argued that DCD can occur without the need for antemortem interventions. Moreover, many interviewees argued that these procedures cross an ethical boundary they, as the treating physician, were simply not comfortable with. This is because antemortem interventions push physicians into that non-therapeutic-intent minefield that they wish to avoid at all costs. Thus, in line with the physician’s “best interests of the patient and family” standard, the transplantable vitality of the organs is deemed insignificant compared to their obligation to provide patient care that is intended for the wellbeing of the patient and no one else.

Extending this reasoning, some interviewees dismissed the suggestion that antemortem interventions could be considered as within the definition of a patient’s best interest if the patient had a predetermined consent to donation. This
dismissal was based on at least two reasons. Firstly, a Victorian intensivist argued that he cannot lawfully provide antemortem interventions:

[I]n the Guardianship Law, the doctors are required to do everything to preserve the health of the person, so they [other doctors] give the facile explanation that because a person wanted that to be done, it’s in their best interests, sorry, that doesn’t make legal sense. So they’ve got a problem.

When there is an overarching law to abide by, predetermined patient donation consent is futile. This is despite the intensivist’s admitting: “[m]y heart may say it would be a good thing, and ethically one could argue about it but the law doesn’t agree”. In fact, recall the legislation and guidelines are inconsistent. As Australian pioneers of DCD, NSW currently bans antemortem interventions, yet in Victoria the Guardianship legislation is sufficiently vague about the matter. Much to their unease, another Victorian intensivist admitted knowledge of antemortem interventions occurring at their hospital:

It does, yeah, it happens here. I have arguments with my colleagues . . . and they would say . . . there’s a worse possible situation, but this may be the best possible outcome . . . and it’s true . . . I can see why you might argue [that], and I can see you might go down there and you talk to the family and they’re distressed and saying . . . is there any possibility . . . [the patient] could become an organ donor?

Because antemortem interventions may facilitate the organ retrieval process, this intensivist begrudgingly acknowledges the direct benefit for families who are keen to donate their loved one’s organs. But they continue on to say they would require “very very clear” evidence of the patient’s previous donation consent
before personally considering the use of an antemortem intervention to facilitate a DCD.

Another interviewee dismissed the suggestion that antemortem interventions could be considered to be in a patient’s best interest because they had serious reservations about the specificity of information currently available in ‘informed consent’ processes. There was also uncertainty that current community education standards regarding the DCD procedure is specific enough to ease ethical concern about “treating them as a dead person by doing those things”, thereby indicating that a considerable amount of uneasiness about antemortem interventions is generated by the fact that they actively challenge current ethical boundaries that have long been known about and agreed to by our medical and general communities. In essence, the ethical boundaries that typically prevent certain procedures from occurring before death are now being reviewed, even relaxed, yet a large proportion of the public are not aware of it.

A further concern about antemortem interventions amongst this sample was the potential for movable boundaries. As illustrated by the pediatric intensivist who said: “I think if you cross the line with something so called as simple as Heparin, you’re on a slippery slope”. This slippery slope comparison was made by many interviewees who claimed that permitting one antemortem intervention, however small, may indeed open the door for other, more intrusive and potentially risky interventions to creep in, the danger of this being that the mechanisms by which these antemortem procedures work may hasten or even cause a patient’s death. For example, when asked the likelihood that Heparin given antemortem could contribute to a patient’s death, one NSW intensivist conceded: “It’s very
unlikely but it only takes one to clear the pitch quite badly. So in general, we tend
not to do that."

This statement provides a number of insights: firstly, although he admits the
potential for patient harm is small, it is still enough to avoid the antemortem
administration of Heparin, but not specifically because of the risk of patient harm.
Rather, the intensivist metaphorically emphasises that should such harm ever
eventuate even to one patient, it would be enough to damage the greater donation
cause. It seems there are greater risks at play than antemortem interventions that
threaten patient care.

Of additional interest is the “in general” proviso and “we tend not”, word
choices, which imply that there may be exclusions to the rule. Is this evidence of
the slippery slope phenomenon well and truly existent in practice? Possibly, but it
is certainly present in the following hypothetical example given by another
interviewee who defines the ethical acceptability of antemortem interventions as
dose-dependent:

[W]hen it becomes more widely known that these are the sorts of things
that go on, then I could conceive of giving a smallish dose of Heparin but
never a largish dose of Heparin. Not the 20,000 sort of dose of Heparin
that you’d use for someone going onto a heart lung machine. Because the
risk of that contributing to their death would worry me a bit.

Like a number of others, this intensivist also recognised the potential
moderating effect of increasing the community’s education level about DCD
procedures. So although he does not feel the community’s current knowledge
equates to informed consent, he may consider administering small doses of Heparin in future, should the public education level about DCD increase. This was a significant finding and one that the literature is lacking.

As discussed, this stance again reinforces that a physician’s fundamental role is to serve their patients and families. Therefore, to guide their own practice, physicians draw upon the treating families as if they are representatives of the community-agreed standards of ethical practice. Thus, the majority of interviewees did not believe they could perform antemortem interventions whilst consistently serving the best interests of an uninformed community. After all, the ethics of antemortem interventions are yet to be agreed upon in the medical sector. For instance, in this sample alone, only one NSW intensivist endorsed changing the state’s current antemortem ban:

Look I'm pretty practical about these things. I think it would be a good thing if they were changed. I mean, if you come to terms with the fact that there's an inevitability of dying, then I can't see anything wrong with optimising organ function in the last day or so of life . . .

Although having a pragmatic perspective about death was not unusual, this intensivist was the only one to explicitly support the use of antemortem interventions for the optimisation of organ function, not just to increase the likelihood that a deceased patient’s donation wishes could be met.

Apart from optimising organ function and therefore, serving a consenting patient’s best interests, this raises a question of whether there are any other justifications for the use antemortem interventions. According to one intensivist, antemortem cannulation, in particular, may offer one appealing benefit to staff:
The cannulation I think is unnecessary. It should be unnecessary to do that premortem. So I think we should have better systems, you know putting great big cannulas in somebody is very intrusive. Putting in very small wires premortem in the artery and the vein so that the veins are then easy to cannulate post mortem is a very small intrusion. And so the issue of cannulation shouldn’t come up I don’t think... that’s just laziness. That’s just not great medicine.

This extract provides further evidence of the slippery slope phenomenon, given that the intensivist believes the ethical acceptability of antemortem interventions is dependent upon the level of intrusiveness caused to the patient.

Overall, any apprehension about antemortem interventions and their slippery boundaries is real. For the credible reasons elucidated above, most of the interviewees deemed antemortem interventions to be currently unethical. However, if the community was fully informed about the new procedures, and remaining concerns were addressed, many interviewees may at least consider performing minor antemortem interventions in the near future. It is also worth noting there were interviewees who believed that the threat to patient care only becomes a possibility if the antemortem intervention is dispensed incorrectly. Yet none pointed out that the same potential threats are present in all medical procedures provided to patients in contexts not related to organ donation. This finding indicates that physicians operate under somewhat different codes of practice with patients identified as potential organ donors compared to non-donation patients. Further evidence of practice inconsistencies will be highlighted in chapter six and also in the next section, where the death declaration process of a potential cardiac death donor is contrasted with that of a non-donor’s death.
5.4.3 Irreversibility and the Dead Donor Rule

Intensivists are required to predict the time to death from cardiac arrest after the withdrawal of life sustaining treatment if a patient is intended for DCD. Depending on local state and hospital protocols, in order for the donation to go ahead, patients must be declared dead within 60 – 90 minutes following treatment withdrawal. While this calculation may seem incredibly complex, it was seldom raised by interviewees, regardless of whether DCD had been implemented in their hospital.

In fact, very few interviewees reported any major difficulties with the declaration of death by irreversible cessation of circulation of blood, the Australian law that underpins DCD. Despite the term irreversibility inciting almost as much ethical and legal literature debate as antemortem interventions, few interviewees had serious issues with it. These dissatisfactions were related to the “default definition” that implies that circulatory death can only be declared “when there’s no hope of so called auto-resuscitation”. That is, when circulation reestablishes itself spontaneously, without assistance or intervention. This intensivist is effectively suggesting that at present, other physicians may be acting unlawfully and therefore unethically, by overlooking the term “irreversibility” and allowing inappropriate patients to become DCD donors. It is an objection that raises some serious questions and even the potential for another slippery slope dilemma:
What do we mean by irreversible cessation of circulation? . . . We get patients who come into the emergency department who have arrested out on the street. They might have had no circulation for 30 or 40 minutes, but we continue to try to resuscitate them when they come in. We might be successful, we may not be . . . We . . . only think about giving up after 20 or 30 minutes . . . Here’s people we’re saying, well, after two minutes, it’s irreversible.

This intensivist passionately points out apparent inconsistencies in the practice of declaring death on the basis of irreversible cessation of circulation. However, the therapeutic intent in the two situations he has described is fundamentally different, thus the irreversibility component is not equivalent. The difference between Patient A who arrests in the street and Patient B who arrests some time after receiving medical care, is that Patient B has further progressed along the continuum of care. Every attempt has already been made to resuscitate Patient B with no success. The decision has been made to withdraw treatment on the grounds of futility. This is quite distinct to Patient A who has just been admitted to hospital and whose prognosis is yet to be determined.

A further argument is that long before the reintroduction of DCD, death has been a process determined according to pragmatic guidelines congruent with the law. Like most medical procedures, these guidelines are set and approved by the medical community and indeed general society. Thus, the common and ethically acceptable interpretation of the circulatory law is that death is called when a patient’s circulation stops (ANZICS, 2008). It does not mean that all bodily functions and cellular activity have permanently ceased. It does not mean that the
heart could not be restarted. One common situation where the irreversibility
definition of death cannot be irrefutably met is described below:

[H]e’s dead when his circulation stops. When he looks dead and
everything about him says he’s dead. That’s how we normally say people
are dead . . . tell the family he’s gone and time of death is 10:22, we know
that if we tried we could restart that heart. We know that if we restarted the
heart that there may be some, there’s very likely to be some preserved
brain function because that’s the basis of all resuscitation anyway. So we
know that to be the case. But we still say they’re dead at 10:22.

Thus, by acknowledging the infinite possibility of resuscitation following
CPR, this intensivist dismisses the relevance of irreversibility in this ethically
acceptable context. He demonstrates that calling the time of death is a judgment
made skillfully by the treating physician; a necessary practice, widely deemed to
be ethical and reasonable on pragmatic grounds. His views were not uncommon
amongst the sample:

The DCD stuff, there is a slight issue in terms of the timing and
irreversibility of death. There’s a pragmatic consensus on exactly what we
do and how we do it which I think is reasonable. Very few things are
absolute, even when it comes to death, because you can restart a heart a
long way down the track if you try hard enough and that means nothing in
real terms.

By also pointing out the infinite possibility of resuscitation through the use of
a lot of medical intervention, this intensivist contends that restarting a deceased
patient’s heart does not equate to much. In the following extract, one interviewee
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supplements this argument by candidly describing how an unintentional but improper resuscitation occurred early into the hospital’s DCD program:

[Y]ou extubate somebody, turn off whatever they’re on, they pass away and you wait the five minute downtime. You take them to the operating theatre and they’re appropriate for lung donation so an anaesthetist comes along, puts a tube down, gives a few puffs on the bag, inflates the lung vigorously, squeezes the heart and that heart can actually restart. That can happen up to half an hour down the track. That has happened once. That’s essentially auto-resuscitation. What we do about that is if they are going to be reintubated, we don’t [do it] vigorously because that’s basically cardiac compression and that’s resuscitation. So it’s important to inflate the lungs gently to keep them open and healthy, but not vigorous ventilation movements. That’s something that we’ve learnt relatively recently from this happening.

Although the resuscitation of a deceased patient’s heart (30 minutes after death was officially declared) had no significant patient outcomes, as a result of this unintentional event, the implicated hospital’s DCD procedures were apparently tightened to ensure it did not happen again.

Most interviewees argued that the irreversibility term is in fact being met through verdict. In other words, when the decision to withdraw a patient’s treatment on the grounds of futility is made, although resuscitation may always be possible, doing so presents a complete paradox:
I don’t see why we need a different definition of death for organ donation. The Act doesn’t say that. The Act says they’re dead when they’ve got irreversible cessation of function of the brain or irreversible cessation of circulation in the blood, in the body or whatever it’s worded. But no one really thinks that means that you’ve got to resuscitate them to see if it’s irreversible. No one thinks that.

His claim of inconsistencies in the death declaration process raises interesting questions regarding why some physicians believe that in contexts involving organ donation, the irreversible cessation of circulation must be irrefutably demonstrated despite the withdrawal of life-sustaining treatment being previously decided upon. Why is irrefutably ruling out the possibility of resuscitation considered to be in the potential donor’s best interests but not in the average deceased patient’s? It is because the current practice of organ donation has been declared lawful and ethical only so long as the organ retrieval is independent to the donor’s death:

The Dead Donor Rule (DDR) says two things: you can only take—harvest, terrible word—vital organs—that is, organs if you take them away you’ll die, such as a lungs and hearts—from dead people. The corollary to that is, you can’t cause the death of a person by doing that. So someone can’t rock up and say, listen, I’m going to donate my heart to my son. I know it will kill me. You can’t do that under the DDR because you will kill that person. So that’s the two aspects to it. So if that is a rule that we stick to, there’s two things—they’re very clear.

In no uncertain terms, vital organ donation can only legally occur in deceased patients. Some interviewees utilise this point to argue that unless the irreversible cessation of circulation has been indisputably determined, the DDR is not being
lawfully enacted. In other words, these few interviewees assert that patients and physicians may find themselves vulnerable to the highly unethical practice of removing vital organs from living or nearly dead donors unless irreversibility of circulation is staunchly determined, for example, by way of ruling out auto-resuscitation. One of these interviewees further called for the review of the legal definitions of death, if colleagues’ continue to resist determining irreversibility in the death of potential DCD donors.

However most interviewees opposed such an “extreme” interpretation of the death determination laws and did not support the need for amendments. These intensivists are right to be ethically confident and comfortable with their “pragmatic” and “reasonable” interpretation and practice of the circulatory death procedures and the DDR. Recall that there have been no recorded reports of spontaneous, unassisted auto-resuscitation following cardiac arrest (Hornby, Hornby & Shemie, 2010). These physicians are not denying the importance of accurate death determination methods, nor the fact that certainty is especially important in potential organ donors because the procedures that immediately follow are very different to deaths not involving organ donation. Certainty protects the public from malpractice and physicians from sleepless nights and lawsuits. Yet death itself is a process, not an event. Physicians, the professionals whose responsibility is to determine death, are asked to “practise the science and art of medicine” at every work shift (AMA, 2004). Those who doubt the rigour of “irreversibility” in the cardiac death of potential donors are searching for an exact scientific answer that does not exist. What’s more, they are ignoring the context of the situation, as well as asking their colleagues to meet different death criteria
because a patient has been identified as a potential donor. This leads to death
declaration inconsistencies between standard medical practice and organ donation
that can only serve to increasing public misconception and fear.

As has been discussed, physicians are acutely aware of their role
responsibilities and priorities to their patient and the next-of-kin. They are highly
mindful of the need to justify their actions: “not just personally, ethically . . . but
also [to] defend to your colleagues and defend to the public, if need be”. Despite
few interviewees explicitly admitting to it, a physician’s awareness of liability
was a common subtheme throughout all aspects of the donation process. Hence,
instead of arguing the irreversibility point in declaring death in potential DCD
donors, some interviewees supported the use of stand-down times to satisfy
certainty. This additional measure of confidence applies after the declaration of
circulatory death in a patient intended for DCD. The benefits and shortcomings of
this DCD-specific measure are now addressed.

5.4.4 Stand-down Times: A Necessary Safe-Guard?

In a further bid to assure precision of the circulatory definition of death and
organ donation’s DDR, the NSW state government and some international
governments (e.g. UK) introduced mandatory stand-down times following the
circulatory death of a potential DCD donor. The few interviewees who mentioned
stand-down times indicated their support for this additional measure of certainty
because of its consistency with their “patient’s best interest” standard. After all,
the procedures that immediately follow the death of a potential organ donor are
different to those not involving organ donation:
The five minute stand down because we’re not just going to leave them in the bed and wash them as we normally do . . . There’s the very special thing of taking them next door and taking their organs out so having a five minute period stand down after they’re dead before we do that, I think is a very good . . . safeguard.

Hence, although the stand-down times can vary from two to ten minutes depending on the jurisdiction, the intention is the same. The time restrictions appear to provide another measure of certainty, in the sometimes uncertain process of death. Assuring certainty of death is imperative to all parties directly and indirectly involved in the organ donation: distressed families, physicians and their colleagues, potential recipients, hospitals, the wider community, and especially to the general cause of organ donation. This is particularly the case if urban myths such as: “they won’t try as hard to save me if I’m a donor” and others discussed in chapter two, are to ever be demystified.

While the advantages of stand-down times were pointed out, interviewees did not mention their potential disadvantages, the obvious being ischaemic organ damage. A possible reason for this omission is that interviewees negated the possible ischaemic effect of stand-down times on organ vitality, which has been suggested in some DCD literature (e.g. Mandell et al., 2006; Reich et al., 2009). Or it may be that any possible organ damage is considered insignificant compared to the physician’s utmost duty-of-care to the patient and their family. The latter explanation is more persuasive given its fit with the physicians’ “patient best interest” standard, the yardstick that was consistently referred to in all other donation process decisions.
5.5 Summary

This chapter provides greater insight into the complex environment in which the organ donation “gatekeepers” currently work. Favourable donation attitudes aside, in practice intensivists do not feel they can allow society’s organ deficit to proactively guide their behaviour, or that they can go as far as to recommend organ donation to the NOK (as some interviewees suggested happens in Spain). To do so was seen to jeopardise their duty-of-care by neglecting the best interests of the patient and the family. These intensivists work hard to maintain a justifiable, neutral stance, yet recently The Authority deemed that this may not be enough. If a conflict of interest is being perceived even by some sections of the community, then they propose an alternative way to deal with it by transferring some of the donation-specific responsibilities to another professional.

Despite interviewees admitting how much easier their job becomes when the NOK initiate the prospect of organ donation, many expressed some reasonable concerns about relinquishing their organ donation responsibilities to another professional, particularly since rapport and trust with the family had typically been developed by the time organ donation becomes an option. What interviewees failed to recognize is that regardless of whether intensivists believe they have a conflict of interest in this specific context, the wish to avoid one is enough to let the potential donation opportunity pass by, and this is likely to be a significant issue in terms of the organ deficit. The logic for the separation of roles may allow for at least one intensivist per hospital to take greater ownership of dealing with
the donation shortage. Regardless of whose role it is to facilitate organ donation however, they still cannot be perceived to push the greater donation cause.

The second section of the chapter examined the contexts under which interviewees did recognise their potential to cause a conflict of interest. It was revealed that most interviewees believed it was currently unethical for a patient with futile outcomes to be admitted to the ICU with only the intention to realise that patient’s potential of becoming an organ donor. This behaviour would be regarded as inconsistent with the patient’s best interests, which is a physician’s ultimate check-point for ethical practice. However, interviewees had no concern if the same patient’s ICU admission was for the “better management” of their EoLC. Rather, interviewees feared that if organ donation was considered too early along the treatment continuum, it would raise serious ethical, medical, and legal issues, even if the treatment was passive. This is the reason interviewees thought that organ donation should not be considered part of EoLC in a further bid to avoid, or at least minimise, the potential conflicts of interest they may pose families.

This finding is disappointing, considering it would be much more difficult to actualise a patient’s donation wishes if the general prospect of organ donation is not theoretically considered part of their EoLC. Without factoring in the opportunity of organ donation, potential donors are having their therapy withdrawn too soon to ever become actual donors. So despite interviewees admitting that they “orchestrate death” frequently for the best interests of the patient and their family, they did not consider a patient’s consent for organ donation enough to regard non-therapeutic ventilation to be in a patient’s best
interests, essentially this refuted the suggestion that there could be more potential donors if Category C patients were supported.

While the advent of clinical triggers may indeed help to recognise potential donors, it may be some time before ED physicians and intensivists feel ethically comfortable, and legally secure, about maintaining passive treatment in potential donors. Many interviewees argued that treatment prolongation intended to allow for brain death and subsequent organ donation may hinder their patients’ right to die a dignified death. This concern is legitimate and emphasises the need for more DCD programs in Australian hospitals in order to tangibly increase donation rates. DCD offers one way to side-step the ethical unease by reducing the duration of non-therapeutic intervention required before organ retrieval. For instance in 2009, of the seven donors that did not require inotropic support in the ICU (3% of Australia’s 247 total donors), six were DCD donors (ANZOD, 2010). Yet although the period of non-therapeutic intervention in DCD should theoretically be less than that which is necessary in DBD, only one interviewee acknowledged this potential merit. A few interviewees recognised the potential benefits the re-introduction of DCD may offer donation-keen families.

In fact, DCD was shown to raise more ethical problems than it can currently solve, with antemortem interventions being particularly problematic. Almost all interviewees deemed it was currently unethical to perform any procedure not directly for the patient’s benefit prior to their death. This was withstanding known patient or NOK donation consent, because such interventions were still not considered to be in the patient’s best interests. Many interviewees also had legal
uncertainties and doubt about the community’s existing level of organ donation education. At least until the community is better educated about DCD and the advancements it may offer, interviewees were more ethically comfortable if antemortem interventions were banned and the new potential donor pool offered through DCD remained restricted to Maastricht Categories three and four.

The few interviewees who were willing to entertain the idea of giving antemortem interventions rejected claims that all antemortem interventions can hasten death, believing any threat to patient care only becomes a possibility if the antemortem intervention is dispensed incorrectly. Yet no interviewees pointed out that the same potential threats are present in most medical procedures outside of the context of organ donation. This was one of numerous findings to indicate that physicians operate under slightly different codes of practice in patients identified as potential organ donors. For instance, death declaration in potential donors requires a higher level of sophistication to ensure the DDR is upheld. For this reason, stand-down times may assist in the quest for certainty in the death declaration of potential DCD donors. Nevertheless, current interpretations of the “irreversible cessation” of circulation to diagnose circulatory death appear highly reasonable and were ethically acceptable to most interviewees.

Overall, the current chapter allows insight into the complex ethical standards that intensivists and ED physicians navigate with every conversion of a potential donor into an actual donor. These ethical standards were found to have permeable boundaries that change according to community expectations. Given that the
The science and art of practising medicine are constantly evolving, once straightforward medical events are now much more complex as a result of technological advancement. All of which results in an ethical tension, as demonstrated in Figure 5.4.

![Figure 5.4. Intensivists' Priorities in the Organ Donation Conversion Process.](image)

The simplicity of Figure 5.4 does not do justice to the numerous ethical considerations intensivists must manage when converting a potential organ donor into an actual organ donor. However, it does illustrate how the physical and emotional needs of critically ill patients and families—both immediate donors and society's needy recipients—must be weighed up against ethically appropriate medical interventions, all whilst managing one's professional and personal ethical standards.

Consequently, intensivists contend that the therapeutic intent of their actions may be questioned when performing any procedure related to organ donation. And to question the therapeutic intent guiding a physician's behaviour was perceived by these interviewees as questioning their duty-of-care responsibilities.
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and their upholding of the “best interest of patient” ethical standard. Decoding the therapeutic intent behind each organ donation procedure allows a better understanding of a physician’s overall motivation and confidence to actualise potential organ donors. It also explains why interviewees unreservedly prefer families to instigate the opportunity for organ donation rather than the intensivist. After all, if the intensivist is not the person to raise the possibility of donation, the therapeutic intent of their subsequent actions is less likely to be ethically challenged.

The problem for organ donation programs is that they rely wholly on physician judgment to determine the best interest of patients who may be potential donors. As the current findings demonstrate, one intensivist’s interpretation of the “best interests” standard may be quite different from another’s. Furthermore, the more unfamiliar or “grey” the territory, the more likely physicians will err on the traditional, conservative take on the patient’s “best interest”. These inconsistencies in policy, opinion, and practice highlight the disjunction amongst the sector about what really is in the patient’s best interests and whether these considerations should extend beyond the patient’s medical wellbeing. In the next chapter, interviewees’ application of the patient best interest standard in DBD is examined.
Chapter Six: Seeking Legal Clarity and Consistency

6.1 Introduction

In the previous chapter, it was demonstrated how physicians’ utilise their “best interest of the patient and family” compass to navigate complex ethical dilemmas when converting potential donors via cardiac death. It is now appropriate to examine how interviewees maintain this standard when converting potential brain dead donors. Accordingly, the first part of this chapter is devoted to issues pertinent to DBD. Although attracting less ethical debate than DCD, there was some diversity of opinion amongst interviewees about DBD and the “legally useful” interpretation of the neurological determination of death. While some may say legal interpretation inconsistencies are just a case of semantics, it will be shown that these differences and uncertainties ultimately affect intensivists’ preferred method of determining brain death, as well as their level of comfort in explaining brain death to the NOK and the greater public.

Interviewees’ use of modern technologies in the quest for the “gold standard” of brain death diagnostics will also be discussed. As observed for the irreversibility determination of circulatory death, determining the loss of neurological function revealed various levels of acceptance of ambiguity amongst interviewees. Even intensivists who were comfortable with their practice and interpretation of the neurological laws were acutely aware that sector dissonance has the potential for bad publicity, litigation, and damage to public donation support levels. It will be shown that the consequences of these legal and practice uncertainties are contributing to some intensivists’ lack of confidence in converting potential brain dead donors.
Interestingly, interviewees’ legal and public relations apprehensions became most obvious in discussions about patient consent registries. The second part of the chapter will, therefore, explore the reasons why interviewees do not consider an individual’s registered donation consent enough to warrant serious consideration, or even be within the “definition of the patient’s best interest. The reasons for the lack of patient autonomy may be surprising to members of the public who signed a consent registry, believing in good faith, and in accordance with its marketing, that it is considered legally valid.

In the previous chapter, it was also shown that one of the main concerns about DCD is not so much that some of its procedures are inherently unethical, but rather that performing these procedures on the uninformed public is unethical. After all, physicians rely on community standards to determine and guide the ethics of their professional behaviour. The final section of the present chapter will detail interviewees’ commonly-held perception that there is too much dissonance between the medical sector and the general public’s understanding of organ donation procedures. The increasingly evident relationship between physicians’ concern for poor public relations, their perception of organ donation education levels in the community, and their confidence in being able to actualise donors will conclude the analysis.

6.2 The Acceptability of Donation after Brain Death

Interviewees believed the demarcation between a patient’s death and possible organ donation is clearer in potential donors declared dead according to the brain
functionality criteria, compared to those defined dead using the circulatory definition necessary for DCD. To most interviewees, DBD affords a degree of certainty that DCD procedures are currently striving to achieve. However, some interviewees claimed that the reintroduction of DCD unraveled some of the inconsistencies that occur regularly and are well-accepted in Australian DBD programs.

Figure 6.1 below displays the interviewees acceptance of DBD by depicting the positions broadly assumed regarding the theoretical acceptance of DBD (x axis) and the operational acceptance of DBD in practice (y axis). It is instantly apparent that compared to the “hot topic” DCD, DBD created fewer differences of opinion. Again permitting Clarke’s (2003) reasoning, this positional map allows silences to be “made to speak” (p.569). For example, no interviewees rejected DBD outright, both in theory and in practice. Nor did anyone suggest there were frequent occasions where DBD can be theoretically acceptable yet operationally problematic. Consequently, there were only two main positions held by interviewees at the time of interview but again, the benefit of Clarke’s methodology means that these positions are not necessarily static and may change for each interviewee, depending on the context and on the patient. Still, the position most commonly assumed by interviewees was being highly accepting of DBD both in theory and in practice (Position A). Other interviewees reported being highly accepting of the theory of DBD but had considerable concerns about its practical application in a variety of contexts (Position B).
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Operational Acceptance of DBD

Theoretical Acceptance of DBD

* = Positions not articulated in the data

Figure 6.1. Theoretical versus Operational Acceptance of DBD Positional Map.

Interviewees who generally assumed position B did so because of legal rather than ethical issues. These are discussed below and displayed in Figure 6.2. Similar to Figure 5.3 in Chapter Five, the DBD procedure is displayed on the left side of the diagram. The right side demonstrates the major issues in approximate order of their emergence in the DBD process. The issues are also colour classified into two types: whether they are issues specific to DCD (purple), or they pertain to both DBD and DCD (blue).
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ICU admission of ED patient for active treatment

Non-emergency department admission to ICU for active treatment

ICU patient with poor outcome

ICU initiates family discussion about prognosis and transfer to EoLC.

ICU review of clinical indicators of imminent brain death. Withdrawal of cardio-respiratory support has been decided.

ICU declaration of death via brain death criteria

ICU contacts state-based OTDA for AODR information and review of medical suitability

ICU MO and/or ODC initiates family discussion about OD

Family consent and support processes

If OD is proceeding, therapy is maintained pending transfer to theatre

If not proceeding to organ donation, limitation of therapy when indicated

DBD

Clinical triggers

OD as part of end of life care/comfortable with admission for OD only

Category C as Potential Donors

Legal Useful Fiction

The Gold Standard: clinical and/or ancillary

Conflict of Interest? Separate staff/role for managing and requesting OD process

AODR before approaching family

AODR true consent or intent only

NOK can overrule personal intent/consent

Antemortem Interventions

Figure 6.2. Issues Arising from DBD Conversions.

Issues found in DBD and DCD

Issues specific to DBD

OD = Organ Donation, DBD = Donation after Brain Death, ICU = Intensive Care Unit, ED = Emergency Department, OTDA = Organ and Tissue Donation Agency, ODC = Organ Donation Co-ordinator, AODR = Australian Organ Donation Registry, NOK = Next of Kin (family), ICU MO = Intensive Care Unit Medical Officer, EoLC = End of Life Care
Of the three highlighted issues specific to DBD in figure 6.2 (purple-coloured), the topic of Category C patients has already been discussed (see Section 5.3.1). Category C patients aside, the current findings did not suggest that the identification and referral of a brain dead patient as a potential donor is a problematic area or one that may provide any major improvements to the metropolitan hospitals donation rate. A senior intensivist who was practicing at the advent of DBD commented:

NSW Intensivist: It always has been pretty obvious. As soon as someone looks like they're becoming brain dead then most of my colleagues – well all of my colleagues would be thinking donation – organ donation.

Researcher: And do you think that was the same 20 years ago?

NSW Intensivist: Yep.

A person has to die from very specific causes to be pronounced brain dead. Recall from Section 5.1, “in society is the very uncommon set of circumstances that you actually reach brain death. We withdraw life support on lots of people who are dying, but to actually fulfil all the criteria of brain death is not that common”. Thus, when the exceptionality of brain death arises, because of its intrinsic and long-association with organ donation, these physicians were genuinely confident that the potential brain dead donor is almost always spotted, and this has been the case for many years now.
Conversely, variance in opinion was observed for the processes that follow the identification and referral of a potential brain dead donor. Depicted in Figure 6.2 by the DBD specific terms: “legally useful fiction” and “the gold standard”, these legal and operational issues are now examined in turn.

6.2.1 Declaring Brain Death: Challenging Cultural Notions of Death

If protocols and guidelines are followed correctly, diagnosing brain death is considered a sound practice that few interviewees expressed any discomfort about, notwithstanding some acknowledgement of inconsistencies within and between ANZICS, state, and local guidelines. In fact, only through a hypothetical lack of adherence to current guidelines did some intensivists concede any potential for misdiagnosis: “god that does a lot of damage, but you can only imagine some dickhead’s done the organ donor testing, the brain dead testing, and fucked it up . . . because you just can’t imagine it otherwise”. While their frustration about damage to public relations is evident, this intensivist firmly believed misdiagnosing brain death could only realistically happen in the hands of the wrong professional.

Australian legislation requires a minimum of two medical practitioners with at least five years experience to conduct brain death testing, but there are additional jurisdiction and hospital minimum requirements. Furthermore, intensivists and other specialists typically perform the brain death testing procedures in hospitals large enough to support an organ donation program. The extract below describes the benefits this specialist system provides to the Australian community:
[W]e’re very lucky in this country that we have intensive care specialists and that’s all we do . . . we’re not surgeons that are operating and then dabbling in a bit of intensive care or some other . . . we’re full time intensive care specialists. So [regarding] brain death and organ donation, I think for that reason then it can be handled by real experts in terms of diagnosis. Because that’s their job.

By having dedicated intensivists with ongoing experience in brain death and organ donation, he denied possibility that brain death could be misdiagnosed in Australia. Rather, the suggestion was that the occasionally publicised awakenings of previously declared brain dead patients are confined to countries where different regulations permit physicians lacking specialist qualifications to conduct the brain death tests:

[W]e have extremely good evidence that if it’s been done properly (and all this stuff you get usually elsewhere like the US where things are not necessarily done appropriately), but if you fulfil all the preconditions and you’re appropriate for clinical testing and clinical testing is done right by the right people and is conclusive, then all of us hand on heart are 100 per cent sure that person will never be alive again, even if we kept him going indefinitely.

Like the majority of interviewees, this intensivist confidently emphasised that as long as designated physicians follow clinical testing guidelines, patients declared brain dead will never be alive again. Yet, it is this exact definition of alive that is problematic or indeed slippery to some. Take the following extract for example: “if anybody objects it’s game over, pull out of the donation process and that person passes away”. While the explicit sentiment of the statement will be
returned to shortly, the suggestion that the patient was not actually deceased until
treatment was withdrawn highlights the inconsistencies inherent in the brain death
determination process. In fact, although the reference is not unique, some
interviewees referred to the concept of brain death as “legally useful fiction”,
created to justify the retrieval of organs in neurological patients with no chance of
recovery: “What we’re using is a useful fiction. There’s a few useful fictions in
ICU about death – definitions of death, particularly a neurologic one is one of
them. I’m not saying it’s a bad thing. It’s just useful stories, like tooth fairy”.
Despite stating they do not wish to label brain death as negative per se, this
intensivist still chooses the words “useful fiction” to emphasise that the utility of
brain death is what brought about its inception over forty years ago.

The belief was that organ transplantation was the principle reason for the legal
inception of brain death. For instance, an intensivist who reported no qualms
about the current practice of DBD commented: “other than that [transplantation
benefits], I can’t see any reason why we should be doing all these tests”. Although
many interviewees were comfortable attributing the start of this medico-legal
determination of death to the facilitation of organ donation (rather than to the
withdrawal of treatment in patients with futile outcomes), only two remarked on it
being a fictional entity. In other words, interviewees were generally accepting of
the “legally useful” description of brain death but not with the fictional
description. After all, the use of “fiction” suggests that the concept of brain death
is made-up or imaginary and most interviewees argued that death in a brain dead
patient is anything but imaginary.
Even so, at no time did interviewees dismiss the inherent complexities of declaring the death of a patient who looks “warm and pink”. Many agreed that the appearance of brain dead patients challenges all cultural notions of what a dead person should look like. Without understanding the supportive technology responsible for the deceased patient’s artificial appearance, brain death still poses many questions for the untrained public and even some health professionals:

[\textit{W}e all can understand how families struggle with the concept of brain death. I mean even in the health field nurses and doctors – it is a bizarre concept to be standing at the end of the bed and watching someone’s chest go up and down and watching the little blip, blip on the monitor and realise that the person has deceased. It is a difficult concept and some families have a fair bit of difficulty in coping with that as an idea.]

This extract provides another example of where professional and community understanding and ethical acceptance are not in sync with technological advances. The introduction of brain death meant that previous legal and ethical boundaries of death were reviewed. This does not happen easily:

[\textit{T}here were a whole lot of problems with it. But in reality, brain death is now very widely accepted. The concept that underpins it, the loss of brain function, is fairly well established and reasonable, ethically and philosophically justifiable. In fact that argument’s quite compelling I think and the way we do it is, I believe, legally and ethically justifiable.]

This extract represents interviewee who assumed high theoretical and operational acceptance of DBD at the time of interview (Position A in Figure 6.1). But it is the delineation of brain death based on the loss of brain function that
would trouble those interviewees who expressed legal and operational difficulties about the DBD process (Position B). Just as they had concerns about the inconsistencies in the legal interpretation of irreversible cessation of circulation death required in DCD, the same interviewees question the current DBD practices. And as noted in their objections to the satisfactory determination of circulatory death, the basis of their argument relates to inconsistencies between what the law demands and what is currently practiced.

6.2.2 Function, Functions or Just Semantics?

Current Australian brain death protocols were perceived not to strictly meet the legal definition of “irreversible cessation of all function of the brain” (ALRC, 1977, para. 136). In the instance of the neurological determination of death, the focus of their contention is not the term “irreversible” but the criterion “all function of the brain”. They suggest that the current testing recommendations to determine brain death only measure brain stem function, rather than whole brain function. They reject the notion that brain stem death would meet the legal criterion of “cessation of all function of the brain” because only some functions would have been specifically tested:

One might argue that organ donation in this state has proceeded along the lines that the person is as good as dead. As good as dead, may as well be dead or as good as dead. That’s not unreasonable, a person who’s got no brain stem function is a potentially non survivor because they cannot function autonomously.

Whilst acknowledging it is not all together “unreasonable” to equate brain stem death with brain death, he goes on to explain that the recommended
definition of death would be impossible to meet, effectively questioning ANZICS adherence to determining whole brain death according to brain stem testing:

So the ANZICs guidelines . . . specify all brain death or total brain death as being equivalent to brain stem death. Which intellectually is impossibility. I’m not saying it’s not inappropriate but thus far this society and I mean the Victoria society, and . . . other states have been practicing organ donation in the absence of being able to fulfil the letter of the law.

By pointing out dissonance between organ donation procedures, recommended guidelines, and legal definitions of death, the insinuation is that Australian physicians are acting unlawfully in taking brain stem testing results as an indication of whole brain death. There was also a call for legal consistency by using the United Kingdom’s definition of brainstem death to demonstrate apparent inconsistencies between Australian law and Australian practice:

[S]ee [in] Australia—the definition is whole brain death, yet we only test the brain stem. In the UK, at least they’re consistent and call it brain stem death, saying that if the brain doesn’t work then the higher centres aren’t going to work anyway.

Thus, although both antagonists admit their colleagues’ interpretation of brain death is not entirely unreasonable, they would prefer the laws to be more specific and, therefore, consistent with practice. Or at the very least they “would like to see more professionally acknowledged there is a problem, but a lot of my colleagues wouldn’t realise there’s an issue, or think too deeply about it”. However, the current data indicates this is not the case.
Other interviewees conceded that there may be a lack of specificity or clarity in the terms used to legally define of brain death. Nonetheless, they vehemently rejected the suggestion that current practices mean they are acting illegally and say it all comes down to personal, professional, and societal legal and ethical interpretations of good practice. Furthermore, these interviewees contend that any “tougher” legal interpretation of neurological death is incorrect, one interviewee describing the colleague’s interpretation as “just plain wrong”. They argue that this particular colleague erroneously assumes that Australian law, like the USA’s, requires the cessation of “all functions of the brain” rather than the singular “all function”. To define brain death according to the plural “functions” would be unrealistic and unnecessary according to another interviewee:

The brain death criteria—they’re a little difficult in that . . . the Australian definition is the whole brain death. We diagnose whole brain death by testing brain stem reflexes and by the presence of coma, irreversible coma, with a cause. We don’t do any other tests of higher brain function and whole brain death, it’s slightly difficult concept to me at times when I think about it. It doesn’t mean that every single cell in your brain is dead. As you know, it’s probably not. But would that be . . . useful diagnostic criteria anyway? I don’t think so.

Accordingly, as was evidenced in the “irreversibility” definition relevant to DCD, most interviewees took a pragmatic approach to the brain death criteria. They agreed “the definition is function and . . . at least it’s arguable that what we do, does determine that all function of the brain has ceased”. Thus, most opted to maintain the widely-agreed upon interpretation of the word “function” as they did not feel that terminology semantics were reason to reject or revise the current
legal definition of neurological death. This was primarily because “most of us just say well, it’s whether the means justify the ends or the ends justify the needs. It’s a hard thing because there is so much ambiguity in clinical medicine. This is one more area.”

A physician’s interpretation of ambiguity will have a direct effect on the method they choose to diagnose brain death. Thus, in an attempt to fall in line with a preferred interpretation of whole brain death, one intensivist has recently modified their practice:

The law really hasn’t been able to cater for the situation of organ donation appropriately. I’m not saying that one’s behaviour hasn’t been inappropriate, I have organised many dozens of organ donations, but in recent times I have done it in a way which is likely to fulfil the legal requirement although I can never prove that it actually did.

Whilst being careful not to brand their colleagues’ or own previous practice as inappropriate, the intensivist insists there are more lawful methods of diagnosing brain death. Although a technical analysis of brain death testing is outside the scope of this dissertation, interviewees’ confidence in current diagnostics is worthy of further exploration.

6.2.3 The Gold Standard Method of Diagnosing Brain Death

Australian physicians use clinical testing to determine evidence of acute brain pathology consistent with the irreversible loss of neurological function (ANZICS, 2008). Where preconditions cannot be assessed, imaging of the patient’s intracranial blood flow is recommended. Although blood flow has no statutory
function in death, it is used to infer that there is no brain function if there is no blood flow. Thus, either clinical testing or blood flow imaging is acceptable to make a diagnosis of brain death in Australia.

When asked their preferred method of diagnosis, interviewees were not in agreement about the best or most reliable measurement. While most insisted clinical testing was the “gold standard”, others argued that it was a test of blood flow. These differences of opinion are broadly demonstrated in the positional map, Figure 6.3 (Clarke, 2005a). Represented on the x axis are the positions interviewees could assume regarding the use of clinical testing to diagnose brain death, and represented on the y axis are the occasions when they also felt the need to include imaging testing.

* = Position not articulated in the data

Figure 6.3. The Gold Standard - Use of Ancillary Testing Positional Map.
Position B outlines those situations (patients) were intensivists were confident using clinical examination to diagnose brain death, yet if this was not possible (for example, due to the patient’s injuries, medication regime, or age), they were also comfortable to base the diagnosis on imaging results. Even so, some were of the opinion:

[A]s long as you have satisfied clinically to the best ability, short of those things you can’t do, then the angiography is fine, but I don’t – I’m not happy with it as a simple substitution . . . They should be because we can’t do all the testing, not because we haven’t tried any testing.

Consequently, some in the field refer to imaging techniques as “ancillary” tests, to reinforce they are not favoured enough to take the place of clinical examination.

For one interviewee, wariness of the imaging techniques was not related to the forbidding possibility of a false negative result (no intracranial blood flow shown when there in fact was some). Rather, the technology can produce false positive results and is thus not sensitive enough to accurately detect a lack of blood flow:

I’d find it hard for anybody to refute the fact there’s no intracranial blood flow on a four vessel angiogram. The difficulty I have with angiogram is just only the fact that I’m not convinced that, as a test, that it’s actually sensitive enough for brain death . . . it sometimes shows intracranial flow and there probably isn’t any.

Furthermore, although imaging techniques were introduced to reduce clinical ambiguity and inconsistency in interpretation, some interviewees claimed the opposite often occurs:
That’s the problem, because again it’s this so-called disjunctive definitions of death . . . we have a cardio respiratory one against neurologic one, and now we have different ways of saying that they’re neurologically dead. One’s clinical; one’s based on imaging. Imaging and function don’t always . . . [go] together . . . So which one do you believe? Which is the gold standard? What do you do when they don’t agree?

Because of a loss of confidence in the recommended diagnostics, some intensivists modify their practice to always include tests of whole brain perfusion (position A on Figure 6.3). If conducted in addition to clinical examination, they argue this practice is more consistent with legal specifications because it tests blood flow of the whole brain. It is furthermore claimed that medication effects are less problematic for whole brain perfusion studies than those tests limited to the brain stem:

The typical scenario in hospital and indeed here is likely to be that a person has been on sedative drugs, for example, and, yet the diagnosis of brain stem death has been made. Sorry that is impossible. It’s not possible to say that a person’s neurological function is not influenced by drugs which are still present in a system.

Interestingly, although most guidelines, (including the ANZICS 2008 statement recommended for Australian practice) have exclusion criteria regarding the plasma concentrations of sedative drugs, their influence on neurological function was not a concern for other interviewees. Some specifically argued that the four vessel angiogram is done to confirm brain death when large amounts of sedative drugs had been administered. Yet one interviewee insists that greater
certainty in brain death is imperative, not only for the treating physician’s conscience but for public approval:

Otherwise, not only is it that we may not sleep well at night, but the public may pick up on this discrepancy as they have done in other countries . . .

On the one hand, I want to see organ donation proceed for the benefit of persons who really do need the organs, but on the other hand, I don’t want to see diverse publicity appearing which might damage that effort. I think it’s time that we cleaned up our act and that we introduced another element of brain death diagnosis.

This argument for increased specificity in brain death is undeniably compelling. Yet whilst others acknowledged the need for clarity, many continued to endorse current brain death practices given that “[t]here are very few gold standards in medicine if you really look at it. Everything is open to interpretation and error”. In the data explored thus far, the poignancy of this statement in many organ donation related decisions and processes is evident.

6.2.4 Summary

While interviewees believed there to be less theoretical ambiguity in DBD compared to DCD, some were not satisfied that current DBD protocols successfully mitigate ambiguity as much as possible. Interviewees’ were philosophically and ethically accepting of the diagnosis of brain death, even if the concept was medically created to keep up with technological possibilities. Despite implementation problems, this now widely-accepted determination of death offers many benefits to society, but without the medical, ethical, and legal endorsement
of brain death, a physician facilitating organ donation would otherwise be seen as confounding their “best interest” standard. Thus the brain death concept permits physicians to personally and professionally offer organ donation, it allows patients to have their donation wishes granted, and it provides the NOK and treating physicians some positive outcome from the loss of life.

Yet, opinions varied about how to interpret the brain death legislation and how to subsequently diagnose brain death. Just as some interviewees expressed concern about the inconsistencies in the legal interpretation of the “irreversible cessation of circulation” required in DCD, some questioned the current DBD practices. The cause of this contention was the differing interpretations of the brain death legislative criteria: “cessation of all brain function”.

Whilst at first the debate may simply appear to be a case of semantics, even physicians who were comfortable with current laws and practices acknowledged the potential dissonance between the terminology used to define brain death and what is actually tested. Some interviewees went further and argued that their colleagues are acting outside of the law by inferring the cessation of all brain function from tests that measure the brain stem only. This situation highlights the need for amendments or ancillary imaging tests to confidently meet current legal criteria. One interviewee suggested a more sensible way around the issue would be to always include whole brain perfusion studies in the diagnosis of brain death. He argued this would also provide the physician with greater confidence to sleep at night in knowing that medications had had less of an influence on patient test results. Moreover, there would be no need for concern that the public might
discover the apparent inconsistencies between brain death legislation and practice. Although some interviewees specifically described this view as “extreme”, the potential for public relations damage was at the forefront of all interviewees’ considerations.

Like all health professionals, physicians have different interpretations of and tolerance for “grey areas” and ambiguity in their practice of medicine. While debate is not always a bad thing, too much can translate to a lack of consensus and, therefore, a lack of action. Likewise, another consequence of ambiguity is its influence on a physician’s capability to explain brain death to the NOK and the general public when required. This is particularly pertinent if there are doubts within the donation sector about imaging testing, which some interviewees do utilise to demonstrate brain death to the NOK to assist their comprehension of the complex diagnosis.

While the brain death debate has been raging for some time and may not readily be resolved, the collateral damage may be more dangerous than the inconsistencies themselves. Physicians with good intentions are keen to shield the public from this debate so as not to impact Australia’s low donation rate. Unfortunately, if detected by community members, the withholding of this information may have the opposite effect:

[Y]ou can understand why the perceptive lay person out there, going through this process, could be awfully confused because there are inconsistencies, and we’re not very honest about it at this particular stage.
So even if the public continues to be shielded from these interpretation ambiguities and technicalities, there is always the risk that some community members may perceive they are not being fully informed about the practice. This in turn may explain some of the public distrust described in Chapter Two, not only of organ donation but of physicians themselves. The impact of honesty and informed consent in community-directed organ donation education will now be discussed.

6.3. The Value of Registered Consents to Organ Donation

As evidenced in the brain death determination process, legal inconsistencies are negatively influencing some interviewees’ confidence to actualise potential organ donors. However, for a number of reasons, a physician’s indemnity interests were most obvious when discussing consent processes. Interviewees prioritise the family’s adjustment to the patient’s death above the patient’s autonomy and expressed wish to donate. After all, a “happy” family means a happy doctor and one less likely to be sued. Associated with this concern was the fact that physicians doubt the legal validity of current consent registries for organ donation. These indemnity concerns will now be examined.

6.3.1 “If Anybody Objects, it is Game Over”: Families Adjustment Versus Patient Autonomy

In most treatment decisions related to organ donation, it is fair to say that interviewees use their “best interest of the patient and family” standard to guide their own behaviour. However, once the decision to withdraw treatment has been made, this yardstick is not faithfully applied to procedures specific to the consent
of organ donation. Although interviewees did not report it happening often, should a patient’s best interests be incongruent with their family’s, physicians will honour the family’s best interests over the deceased’s previous wishes to donate. In other words, there is conflict between the ethical standards of providing ‘autonomy’ for the patient and ‘non-maleficence’ for the family. For instance, if a patient had documented an interest to donate but their family disagreed at the time of death, it was the family’s decision that was unreservedly enacted: “Even if they’d [the patient, had previously] said . . . ‘oh I would really want to be a donor’. It’s not just about them, it’s about their family, it’s about everybody else.” These considerations “about everybody else” were complex and multifaceted.

To begin with, when a patient is identified as a potential organ donor, interviewees will not do anything to jeopardise that family’s grieving process:

[When I’m thinking about the donation of organs, I’m thinking about what’s best for the donor family. Is it likely to have some positive benefits for the donor family? As well as the recipients. But I wouldn’t do anything that was detrimental to the adjustment and the outcome for the donor family.

The potential impact of an unhappy family could be detrimental to the reputation of both the physician and hospital, and for the general cause of donation for that matter: “[t]he general policy is if anybody objects it’s game over, pull out of the donation process and that person passes away. The last thing you want is bad press and increasing people’s distress at a difficult time.” Interestingly, these valid concerns were less top-of-mind in other difficult decisions that physicians must make - such as withdrawing life support.
In their quest to provide patient dignity, physicians will oppose irate families in court, defending their decision to withdraw a patient’s mechanical ventilation. Indeed, acting in-line with a patient’s best interest has been the most influential contributor to a physician’s behaviour in the practices examined thus far. Yet conversely, for patients who had taken the time to previously document their consent for organ donation, this standard, quite rightly, is not followed through. Given the need for public endorsement of organ donation, any negative organ donation publicity has more serious implications than those incurred to a physician’s or hospital’s reputation as a result of a contested mechanical ventilation withdrawal. Physicians cannot risk receiving bad press or the donation rate may really plummet. While the public can rest assured knowing that a family’s adjustment to their loved one’s untimely death is of paramount consideration to physicians, some portions of the community may not be aware that this may come at a cost to individual autonomy. At the time of a patient’s death, not only does one’s autonomy and power cease, but also, treating physicians yield some of their power to the NOK. Yet without thorough and previously digested organ donation knowledge, or at least more than is obtained amidst a personal tragedy, how well equipped are families to handle this power appropriately?

In practice, interviewees observed this ultimate decision-making power was welcomed by some families, but greatly detested by others. Apparently parents of all ages struggled with the decision to donate their decedent’s organs, especially if the patient’s wishes were unknown. Perhaps it is not surprising that only 58 per
cent of families consent to donation (NHMRC, 2009b), even if it is to err on the side of caution rather than a well-considered objection, given 40 per cent of Australian’s also do not know their loved ones wishes (DonateLife, 2010). This would be consistent with interviewees’ assumption that organ donation can represent one more decision or hurdle for a family to cope with in a particularly harrowing time, which may not always translate to a supportive decision:

[H]ardly anybody thinks about it [organ donation] until they’re in the situation, and of course that’s the worst day of their life. So they’re not necessarily very receptive unless they have a great degree of resolution and altruism about them.

The unfortunate reality that families are just beginning to come to terms with the unforseen death of a loved one, when they also must decide whether to donate that person’s organs, was approached sensitivity and compassionately. Yet at times, this sensitivity was interpretable as reluctance or hesitation on the physician’s part, as evidenced in the following statement, where raising the prospect of organ donation was described as “the last thing the family needs . . . Imagine your husband goes to work one day and next thing you’re at the hospital and they say there’s nothing we can do. And within a few hours you’re in intensive care and the doctor’s saying to you would he want to be an organ donor? I mean there’s a fair bit to work through emotionally”.

In this context, a physician’s reluctance to advocate for their patient’s donation wishes was apparently unlike physician behaviour in European nations. Physicians “say they work on families for 48 hours before they give up” seeking NOK consent in countries whose organ donation programs are considered
“world’s best practice”. Many interviewees refuted the idea that such aggressive behaviour would ever be acceptable to Australian culture or helpful to the donation cause. This seems accurate given that, at present, just one dissenting family member is enough to rule out an otherwise favourable family’s donation intentions. Australian physicians “can’t go by the concept of the senior next of kin says ‘yes.’ We need the other one [all NOK must agree]. It’s a hard one. And it’s easier to talk about it, but when in real life, I think it’s extremely hard”.

While not discounting the possible injustice of the situation, interviewees’ real-life experiences led many to summarise that “a lot of people say stuff about life and death without actually being there. And so, once you’re in that situation it’s quite different.” Thus, when faced with incompatible donation verdicts from the patient and their family, or amongst the potential donor family members, Australian physicians have two options. They could behave as the advocate for the patient and/or the consenting family members, adding to the distress of grieving families, damaging the family unit’s cohesiveness and subsequent community donation rates through negative publicity. Or, physicians could balance a patient’s pre-determined donation “wishes against practical realities and other competing forces”, effectively prioritising a patient’s autonomy as secondary to the welfare of those who stand right before them. As such, “even though I can see it’s a huge loss of opportunity”, it is not difficult to see why a patient’s ultimate decision to donate remains in the hands of their family and, furthermore, why a family’s decision to proceed with donation needs to be unanimous. Asking a physician to forsake their respect for a distressed family would be a horrendous task with equally ugly consequences.
6.3.2 Australia’s Donation Registries: “Not Even True Consent”

It may be infrequent that families choose to ignore their dying or deceased family member’s known donation wishes, but the mere possibility of this occurrence reveals inconsistencies in the “best interests of the patient and their family” standard that physicians use to guide their other donation-related behaviour. Still, other intensivists would refute this suggestion on the grounds that current consent registries (both the Australian Organ Donation Registry and state-based initiatives) do not serve as informed consent by omitting many details about the pathways to organ donation:

When most people tick the box they haven’t got a clue what they’re ticking. I don’t think they know what they’re doing when they’re ticking ‘no’, I don’t think they know when they’re ticking ‘yes’. I think most people’s knowledge of organ donation is really limited and I can understand that. I don’t know that we’re necessarily going to ever be able to change that but if we are going to put any store in these registers and things then they have to come up with a lot more education. People can’t just tick a box and think that that means anything.

Finding the right balance between increasing public awareness and decreasing confusion is an important theme to be explored in the next section. Most interviewees believed that Australians are presently under-educated about the processes of organ donation: “I don’t think people actually understand the concept of brain death . . . the education doesn’t cover that. It covers the rather sanitised nature of organ donation”. And it is the public ignorance or misrepresentation that understandably concerns the intensivists who facilitate donation.
Interviewees felt that this knowledge dissonance between the sector and the public effectively voids a patient’s pre-determined consent, despite the fact that it is yet to be tested in an Australian court. This raises questions about the worth of these widely marketed registries. At any rate, organ donation was not considered in the “best interest of the patient” if it was felt that information had been kept, inadvertently or otherwise, from the consenting individual. Conversely, in the same context, physicians believe they can still maintain their best-interest-of-the-family standard because the potential donor’s family are informed of exactly about what is involved in the specific donation process, at the relevant time. These subtleties are demonstrated in the following extract, where the intensivist reaffirms the notion that donation consent could not yet be considered a legitimate extension of patient care:

Now, it could be caring in an extended sense if that’s one of the very expressed explicit wishes of the patient, to become an organ donor in these particular circumstances, maybe we can do it. But for the vast majority, I don’t think it is; not yet, anyway. And that’s a phrase again that really annoys me, as if to say we’re not caring for a person properly if we don’t offer them the option. Well, you don’t offer the patient to be an organ donor; you talk to the family. The patient has no option whatsoever.

This statement emphasises the irony of the present situation: In general, those who wish to make the decision to donate have the most diminished voice—in practice and in the law. The legal complexities of the situation are further evidenced when the possible patient/family positions are hypothetically reversed. That is, if the patient had recorded their objection to donation on the AODR, yet
their family believed the patient’s stance had recently changed, or the family plainly wanted to overrule the objection, the individual’s AODR refutation remains in place. However, this apparent inconsistency is not unusual given the general assumption one can lawfully refuse a procedure or treatment without knowledge but cannot consent to the same procedure unless they are fully informed of it.

Not surprisingly, due to the lack of confidence in the current consent registries and contrary to The Authority recommendations, some intensivists do not check if their patient had a recorded consent before approaching the patient’s family about organ donation. Reasons for this are explained below:

I’ve taken my name off the register. And next time when my licence comes up I’ll take it off the licence as well because I think that the emphasis has changed. They’ve moved it now to being a consent register so it’s signifying that on the register is a consent . . . [T]hey’re trying to make us go and look at that register before we go and talk to the families and for one reason—so we can coerce them . . . So when they put an option on the register that says I am in favour of organ donation but I want you to ask my family, when they put that option there I’ll go back on the register.

Consistent with their own professional practice, and that of many others, this intensivist prioritises their family’s adjustment before a personal wish to donate. Yet unlike interviewed colleagues, it is contended that the objective of the AODR has changed. The reasoning: The AODR is no longer seen as a means for individuals to register their decision to donate their own organs but rather as a
bureaucratic measure designed to aid physicians put donation pressure on vulnerable families. Like a pawn in a game of chess, the intensivist rejects the idea of being made to coerce families to donate, and further states that they would only consider resigning the registry if there was a specific option outlining a preference for NOK to make the decision on their behalf.

Apart from the assumption that Australian families are as collectively-minded and amicable as one’s own, the assumption that few individuals would want their family to go through additional suffering after their death was shared by other interviewees. But most used this family-first reasoning to justify their current practice rather than calling for the disbanding of AODR or indeed making significant changes to it. Arguing that even if an individual’s consent could not be revoked and:

[Y]ou did all the work of bringing in the legislation and all the community hoo-hah that would go with it, you might increase one extra donor in Australia a year. I don’t think it would have a huge effect.

In contrast, these interviewees claimed the AODR did have utility in broaching the difficult discussion of organ donation with the NOK. After all, knowing a loved one’s donation wishes “takes away the guilt from what I [the NOK] want . . . [and] focus on what would they have wanted”, thereby, insinuating that some families may even feel guilty if they focus on their own needs, rather than their deceased’s wishes. So in addition to potentially reducing the pressure suddenly placed upon a vulnerable family, the AODR may assist families to make a more informed decision.
6.3.3 The Call for More Informative Public Consent Education

The current findings suggest that if public consent information about organ donation was made more explicit, some interviewees could more seriously consider their patient’s wish to donate. They may even consider ante-mortem interventions to be in some patient’s best interest. At the very least, if the public were made aware and agreeable to the two possible pathways to becoming an organ donor, some physician’s ethical concerns about public ignorance would be eased. This may in turn influence physicians’ motivation to actualise potential donors. As was evidenced when the NOK initiates the prospect of organ donation, the AODR can offer intensivists some distance from the therapeutic interest debate.

Figure 6.4 depicts how the public level of awareness for organ donation procedures (positively or negatively) may impact physician organ donation behaviour. For instance, when it arises that a family needs to make a decision about whether to donate their family member’s organs, any changes to the number of registered consents and therefore the public general awareness level, would presumably also impact the family’s resolve for organ donation. This may increase the likelihood that the family will instigate the donation discussion, thereby creating the ideal ethical scenario for intensivists. In any case, an increase in public education levels would also have undeniable ramifications for physicians’ confidence to discuss organ donation with the NOK and their overall conviction of AODR consents.
Despite one ED physician’s crude word choice, the sample had a clear message regarding consent issues:

I don’t think we’ve done enough . . . we’re promoting it inside the health field, but one big part of organ donation is the bloody public, a huge part of it, because that’s where it comes from. . . . So I think we’ve got to be a little bit more proactive to get more bits.

While it was agreed that improved public organ donation consent campaigns were needed, interviewees had great difficulty deciphering what level of complexity these campaigns should be pitched at. It would therefore be
irresponsible to infer that raising Australia’s consent level would be as straightforward as Figure 6.4 suggests. This is particularly so considering the medical community is yet to find agreement on many of the ethical uncertainties plaguing organ donation. This internal instability is contributing to the sector’s assumption that it is best not to let these inconsistencies slip out to the uninformed and untrained, which would potentially damage the public perception of organ donation and the subsequent donation rate. This dilemma was accurately described by one intensivist whose hospital was yet to implement a DCD program:

I think they [the public] should hear about [DCD]. If it actually happens then probably it certainly shouldn’t be done without the public being aware of it . . . But on the other hand, if you tried to explain it to the public, that this was actually happening . . . I don’t know that you’d be able to explain it in enough detail for them to actually get that there are some ethical differences or there might be variability of views across the community that were wider than there are exist for brain death.

While a review of current donation marketing tools is outside the scope of this dissertation, it is worth noting that current procedures do assume it is possible to educate the soon-to-be or recently bereaved about the complexities of organ donation in the midst of tragedy. Yet, social marketers continue to insist that only the most basic and superficial information about the benefits of organ donation is appropriate for campaigns and registration websites. While it cannot be denied that the infinite numbers of organ donation scenarios are too complex to detail on a poster or handout for the lay person, it is interesting that social marketing campaigns continue to pitch public organ donation information at a relatively
basic level. Very little change has been noted in Australia’s donation rate. In fact, recently released “family discussion kits” (Donate Life, 2010a) make no mention of DCD at all and very limited information can be found on the remainder of their communications intended for the public. For example, just one of The Authority’s fact sheets makes some mention of the cardiac option: “organ donation may also be possible after a person’s heart has stopped beating, referred to as cardiac death, but this is less common” (Donate Life, 2010b, p.1).

   If disseminated appropriately, some donation messages, such as the introduction of DCD to Australian hospitals, would be able to withstand media beat-up and be well received by receptive members of the public, particularly those who were interested enough to register their consent for donation. To the lay person, cardiac death is an easier, more familiar concept to grasp than brain death and yet brain death has excellent acceptance amongst the general community worldwide (Bell, 2003). This improved awareness may spare the family from making difficult decisions at such a sensitive time. Increasing public consent education about the major matters concerning organ donation may in turn create the “societal shift” interviewees say is desperately needed to improve Australia’s flagging donation rate:

   I talked to a guy who . . . said when he first started being an undertaker . . .

   [and] you asked the question well burial or cremation, people got a bit shocked about it but he said that’s no longer the case. Everyone’s expecting that because it’s normal to think about that. So if we could change organ donation from being something extraordinary to being something ordinary, something that was just part of the way we manage
death and dying, then doctors wouldn’t find it so difficult. Patients and families wouldn’t find it so difficult and we’d be more likely to get the increase in organ donation that we’re after.

Taking on less of a neutral donation stance, this was one of few interviewees comfortable enough to explicitly state they would personally like to see an increase in donations, despite their dual capacity as a medical physician and facilitator of organ donation. However, the interviewee did acknowledge that some colleagues find organ donation “difficult”. Yet they will not feel ethically and legally confident to change current inconsistencies in their operational practices of organ donation until the public receives more information than they do currently.

6.3.4 Summary

When discussing organ donation, interviewees generally appeared more concerned about the ethical rather than the legal ramifications of their involvement. However, this pattern was not observed in relation to consent issues. Even with a patient’s known consent for organ donation, physicians believe that the patient’s family should be responsible for the ultimate decision to donate the patient’s organs. Interviewees believed this stance was important to ensure that they did not interfere with a grieving family’s emotional adjustment. Such considerations did not factor so much into other practitioner decisions, such as the withdrawal of mechanical ventilation in the face of NOK opposition. It was revealed that much of the interviewees’ reluctance to engage in patient advocacy was the result of their doubt of the legal validity of current registries. As a result,
few physicians would ever allow themselves or their hospital to be legally exposed by acting in-line with a patient’s consent.

The interviewees believe that public consent registries do not equate to informed consent and therefore cannot be in a patient’s best interest, given that the public do not know what they consented to at the time of registration. They were also aware of the unavoidable fact that the dead are far less likely to sue or question a physician’s reputation than are unhappy families, who might one day claim that the patient’s pre-determined consent was not informed. Although these circumstances are yet to be tested in an Australian court, none of this sample would be keen to be the first to stand trial. The fear of litigation was ubiquitous and had an undeniable impact on interviewees’ propensity to facilitate the conversion of potential to actual organ donors.

In this study, more specific public education made available on consent registries was wholly welcomed by the sample. The potential benefits of increased public understanding and support for organ donation and its two pathways are at least three-fold. Firstly, NOK will be more inclined to initiate the prospect of donating (a physician’s preferred action); secondly, physicians will be more motivated and confident to offer organ donation to the well-receiving NOK; and finally, physicians may consult consent registries as recommended by The Taskforce, before the NOK are approached about donation. By investing in the multi-million dollar Authority, the Australian Government recognised that sector and practice change were needed, but it seems not enough of this change is yet to occur in the community. Without more informed community knowledge of organ
donation and DCD in particular, it is unlikely to ever become more than an optional extra in our society.
Chapter Seven: Theoretical Implications and Conclusions

7.1 Introduction

This final chapter begins by reviewing the rationale driving this study’s extension of currently applied theories into physician attitude, identification and referral of potential organ donors. The current deficit of a comprehensive model to explain more of the elements contributing to physician conversion behaviour provides an ideal platform to synthesise the findings and recommendations offered by this unique research. It is, then, fitting to introduce this study’s main point of difference to the existing literature: a Substantive Grounded Theory of Intensivists’ Motivation and Confidence to Convert Potential Organ Donors. The core contribution to knowledge is offered as well as a key recommendation to broaden physicians’ interpretation of the patient’s best interests standard through a change to current consent information. This is followed by discussion of the present study’s limitations, motivating suggestions for further research. To conclude, the urgent need to assist our physicians by resolving the uncertainty and ambiguity preventing more of Australia’s potential donor pool being realised is emphasised.

7.2 The Extension of Currently Applied Theories

In Chapter Three, it was suggested that theoretical models of attitudes and decision-making have not been well utilised in organ donation research (Radecki, 1997), resulting in a deficit of collective knowledge and structure within the field (Shanteau, 1986, as cited in Radecki). The few studies that discuss theory employ basic attitude-behaviour models only to explain physician support for various aspects of organ donation or their intention to raise the prospect of organ donation
with NOK. The remainder of the conversion process is overlooked or erroneously assumed to fall in to place, as long as the support for organ donation is there or the prospect to donate has been offered. These attitudinal models fail to account for a physician’s thought schemata, instincts, motivators, knowledge, morals, indemnity considerations, and communication style, as well as available resources within the time-pressured ICU hospital environment. As a result, models such as the TPB (Figure 3.1) and the Hypothesized Donation after Cardiac Death Support Model (Figure 3.3) offer limited practical utility for explaining donor conversion behaviour and thus, the ability to guide policy development.

When Gold and colleagues (2001) proposed their physician model (Figure 3.2), they specified seven motivational and organisational factors influencing the detection and referral rate of potential organ donors in the hospital setting. The addition of factors such as the physician’s workload and qualifications, and the hospital’s culture or motivation for donation, offers an improved theoretical understanding of the physician’s preliminary role in the conversion of potential donors. However, this model’s practical utility is significantly limited by its delineation only for the detection and referral part of the conversion process. As the current results suggest, the detection and referral of potential donors may be the least problematic part of the conversion equation. In an effort to provide a much needed, comprehensive theory, the following model of physician conversion behaviour is proposed. The model is applicable to the Australian context, but may also assist wider policy development.
7.3 Overview of Substantive Grounded Theory of Intensivists’ Motivation and Confidence to Convert Potential Organ Donors

This study is one of the first to examine Australian intensivists’ motivation and confidence to actualise potential organ donors using GTM and Situational Analysis. Following the analysis of 15 in-depth interviews carried out in six major metropolitan hospitals in Victoria and New South Wales, it was shown that an intensivist’s motivation and confidence to convert potential donors is best understood by examining their interpretation of the therapeutic intent guiding each organ donation procedure. In general, when a physician believes the intention of a procedure is to benefit the patient (i.e. be in the patient’s best interests), the potential for conflict of interest is minimal. But when someone other than the patient or their family may benefit from a procedure, this makes the same physician uncomfortable. Given that more than one patient is involved in the organ donation process, physicians’ acute awareness of the potential conflict of interest is a necessity, as is their rigorous application of the patient best interests standard. However, these findings revealed that one intensivist’s interpretation of the best interest standard is quite different to another’s. Furthermore, when faced with new or unfamiliar territory, such as DCD, intensivists’ interpretation of the patient’s best interests will err on the conservative side. This means potential donors are less likely to be medically supported in a way that may realise their potential, for instance the provision of antemortem interventions, or being transferred from the ED to ICU to allow possible organ donation.

Presented over three chapters, the current research demonstrated that differences in opinion and practice of the best interest standard are affecting
intensivists’ motivation and confidence to convert potential donors. These chapters were divided according to three secondary categories affecting conversion behaviour: operational obligations; determining ethics; and seeking legal clarity and consistency. Consistent with the literature (Chernenko et al., 2005; NHMRC, 2009b; Prottas & Batten, 1988; Regehr et al., 2004; Sanner et al., 2006), chapter four discussed how organ donation requires a significant amount of strategic, organisational, physical, and emotional effort from the family, and ICU and ED staff alike.

When Australia’s National Clinical Taskforce was commissioned to surpass theory and provide practical recommendations to all sectors of the organ and tissue donation network, one of their final recommendations was a template for the ideal pathway to improve potential donor conversions in the hospital setting (Figure 4.1). The suggested template was recommended for use by the ICU consultant/medical officer or Donor Coordinator. It was to be used in conjunction with local procedures when deciding a patient’s medical suitability for donation, the timing of the NOK consent discussion, and referral to the AODR. However, the current findings reveal that this process model is too rudimentary to offer any practical utility in what are effectively two different and complex pathways to donation (DBD and DCD). Through remodeling the process (Figure 4.2), the present research allows further insight into the true complexity of the conversion process. Unlike other reference models (e.g. The Authority, 2009; The Taskforce, 2008), this alternative flow chart provides practical utility by depicting the two pathways to organ donation, DBD and DCD. One of the stand-out points of this process model is the fact that intensivists play the crucial role at all junctions of
the delicate conversion process, illustrating the reason they are often dubbed the “gatekeepers” to organ donation.

As obligatory gatekeepers, these intensivists are well aware of their role responsibilities, particularly concerning the conversion of potential organ donors. Yet in practice, organ donation is likely to only become an intensivist’s priority if the NOK determines it to be one of theirs. Intensivists believe they cannot prioritise it or promote it to the NOK without jeopardising their duty-of-care to their patient and the NOK. To minimise any conflict of interest, intensivists therefore maintain a neutral stance towards donation by offering the NOK the opportunity to donate; it is never requested of them, as it is often inaccurately termed in much of the organ donation literature. This neutral physician approach is well rehearsed in comparable international societies (e.g. Canada, UK) but is apparently unlike the world’s “best practice” organ donation programs found in some European nations, namely Spain. Current interviewees rejected suggestions that more forthright physician behaviour and organ donation endorsement would ever be tolerated by the Australian public, nor would it be helpful to our donation rate. This contradicts Swedish findings that suggest physicians who request donation using a neutral rather than a pro-donation approach are major obstacles for increased organ donation (Sanner et al., 2006).

If an intensivist’s duty-of-care is directed to the patient and their family, this means donation is a secondary motivation, an optional extra for the NOK. This may also be interpreted as being indicative of international findings that describe organ donation as a secondary priority for overworked physicians (Pokorná et al.,
Despite unanimous support for the general donation cause, interviewees agreed that managing a potential organ donor can be professionally and personally demanding. Some knew of colleagues who may not even consider initiating the donation process on “their lazy shifts”. Still, it is promising to see that these interviewees did not shy away from their current responsibility to raise the prospect of organ donation with the NOK. This is supported by earlier Australian physician findings (Australians Donate, 2007).

In fact, as found in other local findings (NHMRC, 2009b), there was very little support shown for an initiative to remove some of the taxing management involved in converting potential donors, by introducing dedicated organ donation hospital medical directors. Interviewees currently interpreted this responsibility reshuffle to potentially threaten their duty-of-care to the NOK. The initiative’s implementation outcomes could therefore benefit from The Authority building on the few potential merits acknowledged within this sample, namely a reduction in the intensivists’ conflict of interest that is apparently perceived by some sections of the community. Reducing the potential for conflicts of interest will be especially important for the successful uptake of Australian DCD programs given that, unlike DBD donors, the prospect of organ donation transpires prior to the declaration of death in the potential DCD donor. Reducing the potential for conflicts of interest should theoretically protect physicians, hospitals and governments from unnecessary litigation, as well as bolstering public support for Australia’s organ donation program. However, if the hospital medical director does not gain the backing of the unit on a practical level, all the effort, money and
resources that The Authority has assigned to these roles could prove costly and redundant.

The potential benefits of some form of role separation have been outlined by local (NHMRC, 2009b) and international research (Bernat, 2008; Keenan et al., 2002; Mandell et al., 2006; Simpkin et al., 2009), but has been dismissed elsewhere (DOH, 2008; Meyer & Bjørk, 2007). The current findings indicate that whoever is responsible for the conversion of a potential organ donor, some of the effort could be avoided or at least minimised by reducing the “grey” areas of the organ donation process. After all, it was found that a physician’s confidence to perform the operational requirements of organ donation depends on how ethically and legally comfortable they are in any potential donor situation. Chapters five and six were dedicated to clarifying intensivists’ ethical and legal acceptance of the conversion process.

In keeping with their interpretation of the patient/NOK best interests policy and akin to international findings (Mandell et al., 2006), many interviewees were not comfortable considering organ donation as part of EoLC. They also did not support the transfer of potential donors into the ICU unless it was for active treatment or under the umbrella of better managing a patient’s EoLC. This was regardless of knowing if a patient had pre-determined donation consent. Yet interviewees were comfortable in assuming that it is within the patient’s best interests to have the timing of their ICU death orchestrated to assist their NOK’s adjustment and grieving processes. Hence, while the logic of clinical triggers and acronyms is appealing, the current findings suggest that the identification of
potential donors, particularly brain dead donors, is less problematic than what happens after—asking physicians to maintain futile therapy just to support potential donor opportunities.

As found in international research (Bell, 2003), the current interviewees raised some reasonable concerns about denying severely neurologically damaged patients a dignified death. This may be a possible result of providing non-therapeutic interventions, such as continuing ventilation for extended periods. It therefore seems the current research findings are in line with the fairly stable median times recorded for donor maintenance over the past six years, shown in Table 7.1.

Table 7.1

<table>
<thead>
<tr>
<th>Year</th>
<th>Time from Admission to Brain Death (median hours)</th>
<th>Time from Brain Death to Brain Death (median hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>33.3</td>
<td>29.7</td>
</tr>
<tr>
<td>2005</td>
<td>36.7</td>
<td>31.4</td>
</tr>
<tr>
<td>2006</td>
<td>33.0</td>
<td>28.8</td>
</tr>
<tr>
<td>2007</td>
<td>36.0</td>
<td>32.9</td>
</tr>
<tr>
<td>2008</td>
<td>42.9</td>
<td>36.9</td>
</tr>
<tr>
<td>2009</td>
<td>37.6</td>
<td>32.6</td>
</tr>
</tbody>
</table>

*Note: Adapted version of the Australian donor “Terminal Management” statistics according to year, ANZOD, 2010, p.46.*
Amongst other contributing factors, these relatively stable median times seem indicative of the ethical boundaries for donor maintenance within which our physicians are willing to operate. And although some donor maintenance fears may be mitigated by the reintroduction of DCD, which theoretically requires less non-therapeutic intervention before death, DCD was actually seen to create more ethical dilemmas than it solves. This finding is also consistent with previous Australian physician research that described DCD as a “difficult area”, despite it receiving a general “philosophy of support” (NHMRC, 2009b, p. 32).

The reintroduction of DCD in some Australian hospitals makes avoiding a conflict of interest increasingly difficult for physicians. Recall that in DCD, the prospect of organ donation must be raised with the NOK of a potential donor before the patient has been declared dead. Upholding strict ethical boundaries will be imperative to the success of the DCD program. In keeping with Canadian and UK protocols, these interviewees thought it is more justifiable and therefore easier to limit the new potential donor pool to Maastricht Categories three (and occasionally four), and to ban antemortem interventions outright. However, not all interviewees agreed with this latter stance. Instead, some argued that antemortem interventions only realistically threaten patient care when medications are dispensed incorrectly. Still, no interviewee pointed out that the same potential threat is present in all medical contexts, not related to organ donation.

By increasing the medical and general community’s education and support level for DCD, intensivists may be comfortable enough to administer small doses of antemortem heparin in the future. Consistent with some international
commentators (Gardiner & Sparrow, 2010), this significant finding suggests that some concerns for DCD were not so much that its procedures are inherently unethical, but rather that performing these procedures on an unknowledgeable member of the public is unethical due to the lack of truly informed consent. After all, physicians rely on community standards to determine and guide the ethics of their professional behaviour. And like most of these interviewees, one could deduce that the majority of Australian physicians would not want the responsibility of law-making added to their already complex job descriptions. Therefore, while this study largely supports the current death determination laws, it would appear more definitive legislation regarding antemortem interventions is warranted to ease physician ethical and indemnity concern.

This could be done through more appropriate national human tissue acts rather than state-by-state Guardianship Acts, which were not specifically designed to cater for organ donation situations (Naffine et al., 2009). The state-based Guardianship Acts are also widely open to interpretation. When determining patient best interests, the ambiguity is well illustrated in the Victorian Government legislation (1986, s 38) where, for example, Tibballs (2009) asserts that the lower ranking criterion (f): “treatment to be carried out is only to promote and maintain the health and well-being of the patient”, outranks the consideration of criterion (a); “the wishes of the patient, so far as can be ascertained”.

Interviewees were outwardly concerned that any perceived pushing of the ethical boundaries of DCD might paradoxically lead to damaging community support levels and the new potential donor pool. This concern is well-documented
in the DCD literature (Keenan et al., 2002; Mandell et al., 2006; Tibballs, 2008).

In contrast, it has been suggested that public confidence may actually increase with the understanding that procedures designed to hasten an inevitable death could assist physicians “assure freedom from awareness, and any suffering” in the dying patient (Bell, 2003). Still, due to the intrinsic link between DCD and current physician unease for antemortem interventions, any uncertainty and misinformation about their need or use may be unnecessarily contributing to the delayed uptake of DCD in many Australian hospitals. Akin to American qualitative physician research, the current study also found that there are concerns about the transplantable quality of DCD organs (Mandell et al., 2006). Keeping the medical sector abreast of recent, more favourable DCD organ vitality research will also be imperative to the uptake and success of Australian DCD programs. In the first year following an American DCD communication initiative to hospital staff alone (print, multimedia and personal communication), there was a 93 per cent increase in the number of DCD donors and 179 per cent by 2008 (D’Alessandro et al., 2008).

In the current study, opinion differences and practice inconsistencies were most pronounced when the discussion turned to death determination procedures in the DCD donor. Predicting the time and irreversibility of death following life-supporting treatment withdrawal creates additional ethical considerations in the DCD donor, not to mention logistical consequences. Most interviewees believed current DCD procedures satisfied the “irreversible cessation of circulation” law, but their confidence was not shared by all. Disconcerting claims were made about some physicians not acting in line with their patient’s best interests through failing
to prove irreversibility of cardiac function in potential DCD donors. These claims can be dismissed for failing to take into account the appropriate context of the proposed treatment withdrawal (Bernat, 2008; Snell & Levvey, 2009), and demanding a higher level of certainty than medical science can currently provide: “From a purist perspective, the complete and irreversible cessation of all cell life has become increasingly indefinable” (Shemie, 2007, para. 7).

The legal definition of death is not that there must be irreversible cessation of the heart but irreversible cessation of circulation (Snell & Levvey, 2009). Thus in a bid to reduce the ambiguity, it has been suggested that DCD be renamed to donation after cardiocirculatory death (Snell & Levvey, 2009). This re-title may also allow scope for the future and ethical use of heart transplantation in DCD. As was concluded in overseas DCD qualitative research (D’Alessandro et al., 2008; Mandell et al., 2006), at the very least, it is vital for public and physician confidence that there is national consistency on the eligibility and management of the DCD donor. Current uncertainties are reflected in the fact that the National DCD draft guidelines specify that death must occur 90 minutes post-active treatment withdrawal, NSW guidelines stipulate 60 minutes, and independent hospital DCD policies vary widely.

Although stand-down times were not recently recommended in the National DCD draft protocol, the incorporation of stand-down times in DCD programs provides a more effective measure of certainty in circulatory death than does arguing about what is currently unknown (the time to circulation irreversibility). Again, national consistency is desperately needed because in some states a DCD
donor may be considered dead enough for organ retrieval to begin two minutes prior to the same patient dying in a NSW ICU.

Providing certainty in death was also the focus of current DBD findings. Despite an overall theoretical and ethical acceptance of the brain death criteria, and physicians’ confidence in their ability to explain it to NOK, there was evidence of doubt about the fulfillment of the neurological criteria to determine death. This primarily came from interviewees who had also questioned the lawful interpretation of the cardiac criteria. Consistent with medical ethicists, Truog and Miller (2008), some suggested that the emergence of DCD had reinstated sector uncertainties about the validity and ethics of brain death and the DDR. No interviewee doubted that a patient declared brain dead in Australia would ever recover consciousness. Nor did anyone call for the disbanding of the DDR. But there were some differences in the interpretations of the brain death determination law and even larger inconsistencies in the preferred method of diagnosing brain death, the latter being consistent with earlier qualitative findings (Sadala et al., 2006). These results are also in line with the limited but highly vocal observers who argue that asking physicians to meet our “flawed” definitions of death may be preventing more successful donor conversions (e.g. Tibballs, 2008; Truog & Miller, 2008).

As was concluded in the chapter on DCD, a certain level of ambiguity in medicine is unavoidable, but the medical practice and legal delineation of being alive versus being dead should be clear (Shemie, 2007). Brain blood flow tests have been described as the most reliable ancillary test for brain death (Shemie et
al., 2006; Shemie, 2007; Tibballs, 2008) yet these findings suggest not all intensivists would agree. So while there were fewer inconsistencies evidenced in the opinion, practice, and policy of DBD compared to DCD, there is still work to be done particularly with respect to Australia’s diagnostic practice of brain death but possibly also our legal definition of it. This will be imperative as technology, organ donation and transplantation continues to evolve at such a rapid pace. International commentators have similarly concluded that the law, health policy, and bioethical arenas have not kept up with our ever-advancing insight into the complex spectrum that is life and death (Shemie, 2007).

To benefit the public’s understanding of brain death, there was some support shown in the current study for the introduction of brainstem death terminology, as it is called in the UK. This is an important finding as it seems the public detection of within sector and international inconsistencies may be having a greater impact on intensivists’ conversion behaviour than the actual inconsistencies themselves. This is because no matter where interviewees sat on a potential issue or how comfortable they were with their own management of it, all demonstrated definite unease about the public detecting practice inconsistencies. So whilst these interviewees were comfortable with their own brain death knowledge, some were distinctly uncomfortable about how little the public knew about the complicated concept. Physicians with good intentions were therefore keen to shield the public from the debate in order not to negatively impact Australia’s low donation rate. Even those who stood by their more reasonable interpretations of contentious issues appeared concerned about how they would be perceived by colleagues, media, and the uninformed public. No physicians wanted to be misinterpreted as
prioritising organ donation over patient care or, even worse, to be seen as organ chasers. Hence, the physicians’ overwhelming preference was for the NOK to initiate the prospect of organ donation, so their own duty-of-care could not be called into question.

Legal uncertainties, ambiguity, and different interpretations of state-based guardianship acts further confounded the issue of consent. Like these informants, I now strongly endorse the view that the patient’s family should be responsible for the ultimate decision to donate the patient’s organs, even if this contradicts the patient’s known consent. To prioritise it any other way is too damaging to the family, the staff, and the greater donation cause. Interviewees also rejected Australia’s supposedly legally valid and informed consent registries, claiming only the NOK could currently give legally binding, informed consent at the relevant time. This is a noted theme in the literature (Gardiner & Sparrow, 2010; Tibballs, 2008). Accordingly, some suspicion and resistance was noted for The Authority’s recommendation that intensivists consult the AODR before broaching the topic of organ donation with patient’s NOK. This resistance is in line with popular thinking that a physician’s ignorance of their dying patient’s registered donation status can reduce the potential for conflicts of interest (Naffine et al., 2009).

Consent registries are costly programs to run, even more so if they are to provide a better informed understanding of what it means to consent to organ donation. If intensivists continue to hold little faith in the value of consent registers, they are depriving themselves of a useful tool when broaching the
prospect of organ donation with NOK. More importantly, they are depriving themselves and NOK the closest opportunity to act in line with the patient’s true best interests (i.e. greater than their physical best interests). It is for these reasons that our national consent registry, the AODR, should continue to be funded, marketed and expanded to include information that reflects legally informed consent. Respected international commentators have also provided positive recommendations for the potential to increase consent rates through public registries (Sheehy et al., 2003).

These collective findings are represented in Table 7.2, which is a theoretical attempt to explain the key sequential process currently involved in the intensivist’s conversion of a potential donor into an actual donor. So that the potential for conflict of interest can be minimised, the therapeutic intent of each step of the process is in line with the physician’s interpretation of the patient’s best interests. Some procedures may overlap or recur. Note the italicised font is used to emphasise contentious procedures and points of difference between the two pathways to donation. For instance, Step Seven illustrates the substantial difference in the way death occurs via the two modes of donation.
Table 7.2

Substantive Grounded Theory of Intensivists’ Motivation and Confidence to Convert Organ Potential Donors according to Pathway

<table>
<thead>
<tr>
<th>DBD: Challenging Cultural Notions</th>
<th>DCD: Navigating the Grey Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Upholding patient best interests</td>
<td>1. Upholding patient best interests</td>
</tr>
<tr>
<td>a. Decision to withdraw therapy</td>
<td>a. Decision to withdraw therapy</td>
</tr>
<tr>
<td>2. Supporting the donation potential but resisting organ donation as part of EoLC</td>
<td>2. Supporting the donation potential but resisting organ donation as part of EoLC</td>
</tr>
<tr>
<td>3. Enforcing the Dead Donor Rule and seeking certainty in death:</td>
<td>3. Offer, receive, but never request organ donation</td>
</tr>
<tr>
<td>a. <em>Determining brain function(s)</em></td>
<td></td>
</tr>
<tr>
<td>b. <em>Seeking The Gold Standard Method of Diagnosis</em></td>
<td></td>
</tr>
<tr>
<td>4. Offer, receive, but never request organ donation</td>
<td>4. Obtaining informed NOK donation consent</td>
</tr>
<tr>
<td>5. Obtaining informed NOK donation consent</td>
<td>5. Respecting NOK best interests (no longer the patient’s)</td>
</tr>
<tr>
<td>6. Respecting NOK best interests (no longer the patient’s)</td>
<td>6. <em>Avoiding the Slippery Slope of Antemortem Interventions</em></td>
</tr>
<tr>
<td>8. Enforcing the Dead Donor Rule:</td>
<td>8. Enforcing the Dead Donor Rule:</td>
</tr>
<tr>
<td>a. <em>Determining irreversibility</em></td>
<td>a. Stand down times</td>
</tr>
<tr>
<td>9. Satisfying certainty in death</td>
<td></td>
</tr>
</tbody>
</table>
Overall, the current findings were consistent with suggestions that physicians have a limited, namely medical or physiological, interpretation of patient’s best interests (Richards & Rogers, 2005). Unfortunately, due to the perception of a deficit in legal protection and public consent education, any significant change to this interpretation seems unlikely. Like their overseas counterparts (D’Alessandro et al., 2008; Gardiner & Sparrow, 2010; Keenan et al., 2002; Mandell et al., 2006), some interviewees made a good argument for the need for more detailed public consent education (including DCD) than has been provided to date. This was not to specifically increase the number of registered consents but to improve general awareness and support levels so that consent may become truly informed and organ donation becomes the norm, not an optional extra for the NOK. Commentator Bell (2003), agrees that improved community consent “for all components” of donation would advantageously “reflect the informed will of the public rather than legalise or sanction the tactics of the transplant service” (p. 180).

Public organ donation belief and attitude research continues to highlight the need for improved dialogue and education (Cantarovich et al., 2007; Siminoff et al., 2004). One of the present study’s interviewee descriptions of brain death as being “as good as dead” was a view also shared by 43 per cent of an American public sample, where only 40 per cent of respondents actually considered declared brain dead patients as deceased (Siminoff et al., 2004). However, nearly 67 per cent of respondents who classified brain dead patients as alive were still willing to donate. A further 46 and 34 per cent of respective respondents were comfortable donating from severely brain injured and persistent vegetative state (PVS)
patients, despite also classifying these patients as being alive. These figures rose sharply to 96 and 94 per cent, respectively if the respondent instead classified the severely brain injured and PVS patient as dead.

While similar brain death enquires with Australian samples are yet to be released (Naffine et al., 2009), these American findings do suggest that unlike some interviewees and critics insistence (e.g. Shewmon, 1998a, 1998b, 2001, 2004; Tibballs, 2008), the public are not going to reject organ donation outright if they are provided with more specific information about the intricacies and complexity of the death and donation process. Recall, it is generally found that increased knowledge about donation and transplantation correlates to a more positive attitude toward donation (Ingram et al., 2002). Many people may use more detailed death and organ donation information to guide their own decision making. This may even extend current ethical and societal boundaries so that patients with a poor prognosis, such as PVS or a high spinal cord injury, may one day be able to donate following their withdrawal of life-support (Keenan et al., 2002; Truog & Miller, 2008). At the very least, the current findings and others (Keenan et al., 2002; Siminoff et al., 2004) indicate that some sections of the public, and health professionals, are ready to accept organ donation from a wider pool of patient types. Even if brain death does not equate to death in a traditional sense, it appears that some individuals do not believe it equates to conscious living, that is, to a life worth living. As is also prophesised by medical ethicist, Veatch (2008), who estimates nearly a third of the American population show support for a consciousness-based death definition on religious and philosophical grounds.
However, the great difficulty for social marketers, is balancing how much additional information would be useful to improve general understanding and how much could potentially damage the public’s support for organ donation. The current findings suggest more specific information should now be made available on the national consent registry by The Authority and, at the very least, this should include some basic details about the DCD option.

Finally, the current research revealed a number of situations where physicians appear to operate under a somewhat different, more conservative code of practice in patients identified as potential organ donors. At least one of the current interviewees and some published authors explain this repeated finding by pointing out that compared to non-donation patients (whose burial or cremation is generally days after the death declaration), the course of events immediately following a potential organ donor’s death is vastly different (Shemie, 2007; Shewmon, 2004). Thus, because the organ donation process poses an increased potential for conflicts of interest, physicians will continue to seek out a higher degree of certainty in all matters related to a potential organ donor. This additional need for certainty is understandable and important for the greater donation cause. Still, one’s desire to donate should not be ruled-out by impossible medico-legal demands and bureaucratic red-tape.
7.4 Contribution to Knowledge and Key Recommendation

In an attempt to develop policy, change practice, and add to the knowledge-base of the profession, the substantive theory proposed in Table 7.2 offers more than just an Australian model of when and why physicians convert some potential organ donors into actual donors, but not others. Through the logical collaboration of the GTM and Situational Analysis, this research provides valuable insight into the variance inherent in physicians’ practice of donor conversion, rather than just a few of the collective mechanisms often supplied via quantitative research. The highly-flexible methodology allowed unprecedented access into a small sample of Australian gatekeepers’ experiences, where it was revealed that at present some physicians do not, or cannot, accept organ donation to be within the definition of a patient’s best interests. This is primarily because the current interpretation of a patient’s best interests is largely physiologically determined, rendering it disappointingly narrow at times. As is my opinion, this interpretation of one’s best interests may be surprising to the majority of the Australian public who show great endorsement for the practice of organ donation.

A number of recommendations for improvement to our donation practices have been put forward in this paper and by organisations like The Authority. However, it is hereby predicted that the only tangible change to current donation rates will come when Australian physicians in ICU, emergency, and neurosurgical departments feel ethically and legally confident to philosophically consider organ donation a valid part of a patient’s EoLC and be supported by nationally consistent operational protocols to permit such confidence. This would represent a significant deviation from the current resistance depicted in Step Two of the
Substantive Grounded Theory of Intensivists’ Motivation and Confidence to Convert Organ Potential Donors according to Pathway (Table 7.2). Delays in the uptake of DCD programs in Australian hospitals highlight the active resistance to accepting organ donation as part of EoLC, because the mere practice of DCD forces physicians to consider the option of organ donation prior to the declaration of a patient’s death.

The current findings suggest that more education is needed for both health professionals and the public, particularly about DCD and its mechanisms. This is likely to produce nationally consistent and up-to-date legal and ethical guidelines that are desperately needed to promote physician and public confidence. If more informed consent education was readily available on the national registry, including DCD information, Australian physicians could then seriously consider organ donation as part of their patient’s EoLC, because their ethical concern about public ignorance would be eased. This would unlock physicians’ narrow interpretation of the patients’ best interest standard and, consequently, provide the key to unlock Australia’s potential donor pool.

Due to the complexities inherent in the organ donation process, it would be naïve to suggest that sweeping changes to physician conversion behaviour could result from yet another public general awareness advertising campaign. Previous attempts have not produced long-lasting change, and this is certainly not what is being recommended here. Instead, as part of the donation registration process, more detailed information should be targeted to those individuals who have accessed the registry with the intent to record their wishes. To meet more
informed consent standards, this should include information about the two pathways to donation and basic education about some of the mechanisms involved. To increase physician confidence, it seems the level of information provided would not need to be nearly as detailed as that given to the distressed NOK when an actual donation opportunity eventuates. These information sheets should be available on the AODR and Authority websites (and upon request), and could be similar in presentation, but not in content, to the fact sheets already released and available on The Authority’s website.

7.5 Study Limitations and Suggestions for Further Research

This study relied on interview data, which may not accurately represent interviewees’ true opinions given the human tendency to present oneself in a favourable light. For example, despite assurance of personal and hospital confidentiality, it is possible some interviewees felt uncomfortable about admitting how truly taxing they find managing a potential organ donor. The social desirability bias should have at least been minimized; however, through interviews being conducted in an individual rather than in a group setting. It certainly did not prevent one interviewee admitting that they sometimes seriously question the allocation of organs due to dissatisfaction with outcomes in certain recipient groups, such as cystic fibrosis sufferers or cigarette smokers who do not cease smoking despite receiving life-saving organs. This would be a contentious topic of interest for future research nonetheless. It is also not possible to predict whether having a researcher with no experience in the donation sector exerted a positive or negative influence on responses.
The strength of this rich, real-world research also comes at a cost to statistical generalisability. Using larger samples and quantitative methods should allow future researchers to test the current study’s themes with the aim of broadening the generalisability of findings beyond theory. Comparing high versus low donating hospital units on the basis of the influencing factors identified by this research, for example, may facilitate a re-evaluation of current donation procedures within Australian hospitals. For instance, a study of hospitals in our nation’s consistently highest donating state, South Australia (20 DPMP in 2009), would offer valuable points of comparison for the remaining states and territories. Future research could also examine reasons for the interstate variability of donor maintenance times, as noted in Table 7.3.

Table 7.3.

*Donor Management Times According to State*

<table>
<thead>
<tr>
<th>State</th>
<th>Time from Admission to Brain Death (median hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>81.2</td>
</tr>
<tr>
<td>TAS</td>
<td>64.1</td>
</tr>
<tr>
<td>NT</td>
<td>45.0</td>
</tr>
<tr>
<td>VIC</td>
<td>40.5</td>
</tr>
<tr>
<td>SA</td>
<td>37.8</td>
</tr>
<tr>
<td>QLD</td>
<td>36.9</td>
</tr>
<tr>
<td>NSW</td>
<td>36.7</td>
</tr>
<tr>
<td>WA</td>
<td>33.7</td>
</tr>
</tbody>
</table>

*Note:* Adapted version of the 2009 Australian donor “*Terminal Management*” statistics according to state, ANZOD, 2010, p.46.
Amongst other factors, the substantial variability in median times from patient admission to brain death across our different states and territories may be indicative of the different ethical donor maintenance boundaries within which Australian physicians are willing to operate. Using the substantive theory to guide the development of a quantitative survey instrument, designed to test whether the factors outlined in the interviews and the empirical literature, may help differentiate and explain different hospital and state donation rates. This survey could also be distributed to overseas units.

Intensivists’ wariness of the legally valid and informed consent registries highlights promising research opportunities. After all, the need to improve general public organ donation education was one of few issues where all interviewees showed consensus. Australian public and physician focus groups could be useful in ascertaining the degree of specificity needed in public DBD and DCD information and consent registration packs, before our donation gatekeepers will deem a patient’s consent information worthy of their consideration. Using a pre, post, and follow-up education dissemination design, these results may have significant ramifications for current marketing directives but also policy development. Larger, quantitative samples could also assess whether an improvement in the public’s DCD education and the potential legalisation of antemortem interventions could translate to intensivists’ acceptance for antemortem interventions.

The key to creating the societal shift that physicians say is needed to make organ donation ordinary rather than extraordinary is likely to come through long-
term education directives. For example, the demonstration of positive attitude, knowledge, and even behavioural impacts following school-based environmental education interventions (Skamp, 2009), has lead to the Australian Government’s recent addition of environmental sustainability to the school curriculum (Australian Government, 2010b). Future research should investigate whether the application of culturally-sensitive organ donation education to existing secondary school health and wellbeing curriculum programs has any long-term effects on donation rates. This could be done by building on successful school, family, and mobile learning centre initiatives, such as Life Education Australia but limited to senior secondary pupils due to the sophisticated subject matter.

The current research indicates that The Authority’s recent implementation of clinical triggers and dedicated hospital organ donation specialists should theoretically benefit the overall donor conversion rate, particularly DCD donation. However, it will be particularly relevant for future research to establish whether having dedicated donation specialists may, in effect, just reposition one set of issues from one professional to another. At what point in the conversion process the hand-over occurs will also have interesting conversion-rate research implications, given that this sample deemed it unethical to transfer terminal patients to the ICU just to support their potential to become organ donors. Still, it will be important for the dedicated specialist is not introduced too late in the process to really capitalise on Australia’s potential donor pool. As observed in this and other local research (NHMRC, 2009b), physicians may especially benefit from gaining a better understanding as to why NOK refuse organ donation and whether they regret this decision once their initial shock and grief has subsided.
Analysing these sensitive themes amongst parents and pediatric physicians could offer promising insights into Australia’s even-lower donation rate in children.

The Australian advent of DCD processes and the release of draft national guidelines also provide abundant means for further local inquiry. For example, adding to international research that contrasts the quality and transplantation success of organs procured from circulatory dead donors compared to brain dead donors (Devey & Wigmore, 2009; de Vries et al., 2010; Snell & Levvey, 2009; Suntharalingam, et al., 2009). Due to the rapid time in which DCD must occur, comparing how local DCD protocols handle the time and place of treatment withdrawal in the potential circulatory donor is also worthy of investigation. Within this small sample alone there was concern about the indignity of withdrawing treatment and asking NOK to wait out the observation period in an anesthetic bay or operating theatre, only to have to return to the ward if death did not occur in the specific time frame. Such a scenario also highlights the contentious issue of observation time and stand-down periods: how long is long enough to declare death and irreversibility at that? The future success of DCD in Australia depends on medical and general community acceptance of the national protocol and its roll-out. It will also be important for researchers to explore whether an extension of DCD categories to include high spinal patients and heart transplantation may one day be considered ethically and socially acceptable to physicians and society alike. Finally, the ethical retrieval and transplantation of hearts from DCD donors is also in dire need of international agreement in policy and protocol (Reich et al. 2009).
Despite one interviewee’s suggestion that asking physicians about DBD procedures is only likely to produce “standard answers”, the current study revealed there is a definite need for wider research into physicians’ perceptions of brain death practices. The most immediate question for larger samples is whether current Australian brain death protocols do, in fact, strictly meet the lawful definition of brain death, or whether the legal wording or diagnosis practices need to be tightened. For instance, in the legal determination of brain death, does the definition of the word “function” need to be further clarified by the medical community? The current findings suggest some physicians would even support the introduction of legislation so that an ethical basis for pronouncing death could be the permanent loss of brain functionality related to consciousness, sometimes referred to as the “higher-brain definition” (Veatch, 2008, p. 673). It would also be highly relevant to assess how much medical ambiguity intensivists are comfortable with when diagnosing brain death via clinical and/or technological means. A questionnaire using themes that have emerged from this and detailing alternate legal definitions of brain death, case studies, or hypothetical scenarios (including certain medication plasma levels), may assist policy makers lessen the gap between our brain death policy and practice.

Although the theme was not strongly evidenced in the current sample, the impact of public distrust of physicians, their profession, and authority figures on organ donation rates was raised by one interviewee. Employed at a hospital servicing a highly multicultural, low socioeconomic area, this interviewee outlined that “people who are disgruntled about their lot in life…may lack the intrinsic desire to consent to donation to help others, unknown to them, when
asked by an untrustworthy figure”. This supports local (NHMRC, 2009b) and international findings that physicians are sensitive to the potential impact of religion and culture on consent to donation (Chernenko et al., 2005; Guadagnoli et al., 1999; Regehr et al., 2004). Future research should examine if this lack of trust from some community groups is something Australian physicians face daily, or simply a misguided attempt to explain low NOK consent or potential donor referral rates in low S.E.S. hospitals. Such research is imperative given our multicultural population and the consistent finding that depending where they live; indigenous Australians are 3-17 times more likely than the general Australian population to require kidney transplantation (Preston-Thomas, Cass, & O'Rourke, 2007.). The impact of culture on consent rates in the reverse scenario may also be worthy of further inquiry. One overseas-born interviewee commented on the increasing number of newly-trained Australia ICU physicians originally from the Indian sub-continent. Cultural differences will have some positive or negative influences on physician training and NOK communication styles for example.

Finally, future research may need to overcome the hospital access difficulties that were experienced in the current study. Despite university and state ethics approval, individual and hospital confidentiality assurances, and willing participants, conducting on-site hospital interviews was particularly difficult in one Australian region due to state governance issues.
7.6 Conclusion

The Taskforce and The Authority have proposed that potential donor opportunities are not being recognised in the Australian hospital setting. This is consistent with the current research that suggests uncertainties and inconsistencies in opinion, policy, and practice are significantly impacting the motivation, confidence, and ultimately, the donor conversion behaviours of physicians and, subsequently, the families they are treating. An Australian model was needed to provide new explanations and guide practice and policy development. A Constructionist Grounded Theory and Situational Analysis approach was thereby chosen to ascertain the Gatekeepers’ perspective into what differentiates the potential organ donor from being considered a real donor opportunity. The findings delineated the two sides of a physician’s facilitation of organ donation: the rewarding, fulfilling, positive-out-of-tragedy component and the strenuous, emotionally draining and unnecessarily ambiguous component.

As a society in desperate need of more organ transplantation, we owe it to ourselves and our over-burdened physicians to make their jobs easier by lessening conflict of interest concerns. Measures to reduce the ambiguity and uncertainty currently plaguing physicians’ interpretation of a patient’s best interests standard should therefore be directed at three key areas:

- establishing agreeable operational roles and responsibilities for physicians involved in the practice of organ donation
- implementing nationally consistent ethical practice guidelines
- clarifying inconsistent organ donation legislation, including the supposedly legally informed public consent registries.
The increasingly evident relationship between physicians’ concern for poor public relations, their perception of an uninformed public, and their confidence to convert donors calls for the immediate expansion of public consent registration information to include more explicit information about the two pathways to becoming an organ donor. If physicians’ ethical concern about public ignorance is eased, this in turn may influence physicians to act in line with a broader interpretation of a patient’s best interests thereby accepting organ donation as part of EoLC and subsequently influencing the physician’s motivation and support for operational practices that will actualise potential donors.
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### Appendix A

**Abbreviations and Acronyms**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACT</td>
<td>Australian Capital Territory</td>
</tr>
<tr>
<td>ADAPT</td>
<td>Australasian Donor Awareness Program</td>
</tr>
<tr>
<td>AMA</td>
<td>Australian Medical Association</td>
</tr>
<tr>
<td>ANZICS</td>
<td>Australian and New Zealand Intensive Care Society</td>
</tr>
<tr>
<td>ANZOD</td>
<td>Australia and New Zealand Organ Donation Registry</td>
</tr>
<tr>
<td>AODR</td>
<td>Australian Organ Donor Register</td>
</tr>
<tr>
<td>THE AUTHORITY</td>
<td>Australian Organ and Tissue Donation and Transplant Authority</td>
</tr>
<tr>
<td>CPR</td>
<td>Cardiopulmonary Resuscitation</td>
</tr>
<tr>
<td>DA</td>
<td>Donor Action Programme</td>
</tr>
<tr>
<td>DBD</td>
<td>Donation after Cardiac Death</td>
</tr>
<tr>
<td>DCD</td>
<td>Donation after Cardiac Death</td>
</tr>
<tr>
<td>DDR</td>
<td>Dead Donor Rule</td>
</tr>
<tr>
<td>DPMP</td>
<td>Donors Per Million Population</td>
</tr>
<tr>
<td>ED</td>
<td>Emergency Department</td>
</tr>
<tr>
<td>EDHEP</td>
<td>European Donor Hospital Education Programme</td>
</tr>
<tr>
<td>EoLC</td>
<td>End of Life Care</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>GCS</td>
<td>Glasgow Coma Scale</td>
</tr>
</tbody>
</table>
GIVE = low and descending Glasgow Coma Scale (GCS), I = intubated, V = ventilated, E = extubation

GP = General Practitioner

GTM = Grounded Theory Method

HIV = Human Immunodeficiency Virus

ICD = The International Classification of Diseases

ICU = Intensive Care Unit

IRODaT = International Registry of Organ Donation and Transplantation

NHMRC = National Health and Medical Research Council

NODC = National Organ Donation Collaborative

NOK = Next of Kin

NSW = New South Wales

NT = Northern Territory

OD = Organ Donation

ODC = Organ Donor Coordinator

OECD = Organisation for Economic Co-operation and Development

QLD = Queensland

OTDA = Organ and Tissue Donation Agency

SA = South Australia

TAS = Tasmania

THE TASKFORCE = The National Clinical Taskforce on Organ and Tissue Donation
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>TPB</td>
<td>Theory of Planned Behaviour</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>USA</td>
<td>United States of America</td>
</tr>
<tr>
<td>VIC</td>
<td>Victoria</td>
</tr>
<tr>
<td>WA</td>
<td>Western Australia</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organisation</td>
</tr>
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</table>
Appendix B

Operational Definitions

Autopsy: an examination of the body after death to determine the cause of death and/or to discover and describe pathological processes present in the body at the time of death (NHMRC, 2007).

Antemortem (premortem) intervention: intervention that is carried out before death with the aim of maintaining organ viability following irreversibility of circulation (NHMRC, 2007).

A potential donor: a patient who demonstrates the clinical signs of impending death by irreversible loss of all brain function or irreversible cessations of circulation, is haemodynamically supported in an intensive care unit or emergency department and meets the general medical criteria for organ and tissue donation in Australia (adapted from DonateLife, 2010c).

An actual donor: a deceased patient where organ retrieval occurred.

An unidentified or missed referral: a realistic medically suitable donor who failed to become an actual donor because of lack of medical intervention. (Hibberd et al., 1992)

Brain death: a term for death determined by the irreversible loss of all function of the brain. It must be distinguished from severely brain damaged states such as permanent or persistent coma or unconsciousness, post-coma unresponsiveness (vegetative state) or minimally conscious state (NHMRC, 2007).
Cardiac death or non-beating heart death: are terms for death determined upon irreversible cessation of circulation. Criteria for diagnosing cardiac death clearly differentiate this from other states such as irreversible cardiac disease in which circulation is failing or is maintained artificially, or where cessation of circulation is predicted but has not yet occurred (NHMRC, 2007).

Category C patient: patients with the potential to progress to brain death within 24 hours if supportive treatment were continued (Opdam & Silvester, 2006).

Constant comparative methods: grounded theory method of comparing data with data, data with category, category with category, and category with concept, to find similarities and differences, assisting the analyst move from the level of description to one of abstraction (Charmaz, 2006; Corbin & Strauss, 2008).

Death: is the final cessation of the integrated functioning of the body. Integrated functioning is a characteristic of living beings. Death is observed to have occurred when there is irreversible loss of brain function or irreversible cessation of circulation (NHMRC, 2007).

Health professional: A physician, registrar, nurse, or hospital administrator.


Maastricht Categories: An international meeting on organ donation after cessation of the circulation held in Maastricht in 1995 identified four categories of potential donors (Kootstra et al., 1995), to which a fifth category was added in 2003. These are described as either uncontrolled (Categories I/II and V) or controlled (Categories III/IV) donors.
Converting Organ Donors: A Situational Analysis of Australian Physicians

Category I: dead on arrival
Category II: unsuccessful resuscitation
Category III: awaiting cardiac arrest
Category IV: cardiac arrest in a brainstem dead cadaver
Category V: unexpected cardiac arrest in a critically ill patient.

Organ: a part of the body that performs vital function(s) to maintain life. These include the kidney, heart, lung, liver and pancreas (NHMRC, 2007).

Organ recovery: The process of procuring a donor’s organs or tissues for the purpose of transplantation (NHMRC, 2007).

Recipient: a person who receives organs and/or tissues from another person (the donor) (NHMRC, 2007).

Tissue: a group of specialised cells (e.g. cornea, heart valves, bone, skin) that perform defined functions (NHMRC, 2007).

Warm ischaemic time: The time from irreversible cessation of circulation (and non-perfusion of organs in situ) until the commencement of preservation solution for organ procurement (NHMRC, 2007).
Appendix C

Human Research Ethics Committee Approvals

Research Services
Office of the Deputy Vice-Chancellor (Research) (Melbourne Campus)

MEMORANDUM

TO: Dr Greg Tooley
School of Psychology, Burwood

cc: Emily Tunks

FROM: A/Executive Officer, Deakin University Human Research Ethics Committee (DU-HREC)

DATE: 25 January 2008

SUBJECT: Project EC 304-2007 *(Please quote this project number in future communication.)*
Increasing Australian organ donation rates: a study of personal and organisational barriers to donation, as perceived by health professionals

This application was considered at the DU-HREC meeting held on 12 December 2007.

Approval has been given for Emily Tunks, under the supervision of Dr Greg Tooley, School of Psychology, to undertake this project for a period of three years from 25 January 2008.

The approval given by the Deakin University Human Research Ethics Committee is given only for the project and for the period as stated in the approval. It is your responsibility to contact the Executive Officer immediately should any of the following occur:

- Serious or unexpected adverse effects on the participants
- Any proposed changes in the protocol, including extensions of time.
- Any events which might affect the continuing ethical acceptability of the project.
- The project is discontinued before the expected date of completion.
- Modifications are requested by other HRECs.

In addition you will be required to report on the progress of your project at least once every year and at the conclusion of the project. Failure to report as required will result in suspension of your approval to proceed with the project.

DU-HREC may need to audit this project as part of the requirements for monitoring set out in the National Statement on Ethical Conduct in Research Involving Humans (1999).

Signature Redacted by Library

Jeremy Chin
On behalf of DU-HREC
(03) 9251 7123
Dear Greg,

SVH File Number: 08/103
Project Title: Increasing Australian Organ Donation Rates: A study of personal and organisational barriers to donation, as perceived by Health Professionals
(HREC Ref: 08/SVH/97)

Thank you for submitting the above project for ethical and scientific review. The project was first considered by the St Vincent's Hospital HREC Executive at its meeting held on 16 June 2008. This lead HREC has been accredited by NSW Department of Health as a lead HREC under the model for single ethical and scientific review.

This lead HREC is constituted and operates in accordance with the National Health and Medical Research Council's National Statement on Ethical Conduct in Research Involving Humans and the CPMP/ICH Note for Guidance on Good Clinical Practice.

I am pleased to advise that the Committee at an Executive meeting on 7 July 2008 has granted ethical approval of the above multi-centre project to be conducted at the following NSW Public Health site(s):
- Royal Prince Alfred Hospital;
- Liverpool Hospital;
- Westmead Hospital;
- St Vincent's Hospital;
- Royal North Shore Hospital;
- The Children's Hospital Westmead;
- St George Hospital;
- Wollongong Hospital; and
- Nepean Hospital

If a new site(s) is to be added please inform the HREC in writing and submit a Site Specific Assessment Form (SSA) to the Research Governance Officer at the new site.

The following documentation has been reviewed and approved by the HREC:
- NEAF (AB/5214/1)
- Protocol Version 2 dated 2 July 2008;
- Participant Information Statement and Consent Form Version dated 1 November 2008; and
- Letter to Doctors at sites.

Please note the following conditions of approval:
1. This approval is valid for five years, and the Committee requires that you furnish it with annual reports on the study's progress beginning in July 2009.

2. The Co-ordinating Investigator will immediately report anything which might warrant review of ethical approval of the project in the specified format, including unforeseen events that might affect continued ethical acceptability of the project and any complaints made by study participants regarding the conduct of the study.

3. Proposed changes to the research protocol, conduct of the research, or length of HREC approval will be provided to the HREC for review, in the specified format.

4. The HREC will be notified, giving reasons, if the project is discontinued before the expected date of completion.

5. The Co-ordinating Investigator will provide a progress report, in the specified format, annually to the HREC as well as at the completion of the study.

HREC approval is valid for 5 years from the date of this letter.

You are reminded that this letter constitutes ethical approval only. You must not commence this research project at a site until separate authorisation from the Chief Executive or delegate of that site has been obtained.

A copy of this letter must be forwarded to all site investigators for submission to the relevant Research Governance Officer.

Should you have any queries about your project please contact the Executive Officer – Research Office, Tel: 8382-2075, email research@stvincents.com.au. The HREC Terms of Reference, Standard Operating Procedures, membership and standard forms are available from the St Vincent's Hospital website:

Please quote 08/103 in all correspondence.

The HREC wishes you every success in your research.

Yours sincerely

Sarah Charlton
Executive Officer
Research Office
Level 6 deLacy Building

Signature Redacted by Library
Appendix D

Plain Language Statement, Consent and Revocation Form

DEAKIN UNIVERSITY
PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Participants

Plain Language Statement

Date: 1 November 2007

Full Project Title: Increasing Australian Organ Donation Rates: A Study of Personal and Organisational Barriers to Donation, as Perceived by Health Professionals

Principal Researcher: Dr Greg Tooley
Student Researcher: Emily Tunks
Associate Researcher(s): Dr Tess Knight

This Plain Language Statement and Consent Form is 5 pages long. Please make sure you have all the pages.

1. Your Consent

You are invited to take part in this research project.

This Plain Language Statement contains detailed information about the research project. Its purpose is to explain to you as openly and clearly as possible all the procedures involved in this project so that you can make a fully informed decision whether you are going to participate.

Please read this Plain Language Statement carefully. Feel free to ask questions about any information in the document. You may also wish to discuss the project with a relative or friend or your local health worker. Feel free to do this.

Once you understand what the project is about and if you agree to take part in it, you will be asked to sign the Consent Form. By signing the Consent Form, you indicate that you understand the information and that you give your consent to participate in the research project.

You will be given a copy of the Plain Language Statement and Consent Form to keep as a record.

2. Purpose and Background

The purpose of this project is to better understand the impact of attitudes, and behaviours of senior medical staff, and management; the policies, procedures and culture of the work unit, and the nature and infrastructure of the department, on subsequent organ donation rates.

A total of 20 people will participate in this project.

Previous experience has shown that organ donation is a medical, economic and socially critical issue. Despite this, donation rates continue to plateau at suboptimal levels well below what they should and could be. Previous research suggests the worldwide crisis in
organ shortage may not only be due to a lack of potential donors, but rather a failure to convert many potential into actual donors.

You are invited to participate in this research project because physicians and ICU managers have been identified as a crucial link to the organ donation process.

The results of this research may be used to help researcher Emily Tunks to obtain a Doctorate of Psychology (Health) degree.

3. **Funding**
This research is totally funded by Deakin University.

4. **Procedures**
Participation in this project will involve:

A one hour, face-to-face interview will be carried out on site at your hospital by investigator, Emily Tunks. Interviews will be recorded via audio tapes and note-taking.

5. **Possible Benefits**
Possible benefits include:

As well as providing a platform for larger quantitative enquiries, this research may facilitate the re-evaluation of organ donation procedures within hospitals and offer a conceptual framework upon which hospital administrators could structure organ retrievals within relevant units (e.g. ICU). Thereby, reaping the medical, economic and social benefits that even the smallest increase to our organ donation rate would bestow.

We cannot guarantee or promise that you will receive any benefits from this project other than an opportunity to express your opinion and experiences for the attainment of greater knowledge.

6. **Possible Risks**
Possible risks, side effects and discomforts include a potential for discomfort when recalling negative previous experiences with organ donation. The interview can cease immediately if you are uncomfortable at any time. Please phone LifeGIFT (VIC: 1300 133 050 or NSW: 02 9229 4461) if you feel you need follow-up debriefing with trained counsellors at no charge.

There are no unforeseen risks if you decide to withdraw from the study.

7. **Privacy, Confidentiality and Disclosure of Information**
All data will be de-identified, stored at Deakin in a locked filing cabinet and accessed only by the principal researchers. The data will be stored for the minimum requirement of six years after the final publication and it will be destroyed at the end of the storage period.

Any information obtained in connection with this project and that can identify you will remain confidential. It will only be disclosed with your permission, subject to legal requirements. If you give us your permission by signing the Consent Form, we plan to discuss and/or publish the results with LifeGIFT and a peer-reviewed journal.

In any discussion or publication, information will be provided in such a way that you cannot be identified.

8. **Results of Project**
Results of the project will be shared with participants and LifeGIFT following acceptance of the thesis. It is hoped that a publication in a peer-reviewed journal will result from the project.
9. Participation is Voluntary

Participation in any research project is voluntary. **If you do not wish to take part you are not obliged to.** If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. Any information obtained from you to date will not be used and will be destroyed.

Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your relationship your employer, Deakin University or LifeGIFT.

Before you make your decision, a member of the research team will be available to answer any questions you have about the research project. You can ask for any information you want. Sign the Consent Form only after you have had a chance to ask your questions and have received satisfactory answers.

If you decide to withdraw from this project, please notify a member of the research team or complete and return the Revocation of Consent Form attached. This notice will allow the research team to inform you if there are any health risks or special requirements linked to withdrawing.

10. Ethical Guidelines

This project will be carried out according to the *National Statement on Ethical Conduct in Human Research (2007)* produced by the National Health and Medical Research Council of Australia. This statement has been developed to protect the interests of people who agree to participate in human research studies.

The ethics aspects of this research project have been approved by the Human Research Ethics Committee of Deakin University.

11. Complaints

If you have any complaints about any aspect of the project, the way it is being conducted or any questions about your rights as a research participant, then you may contact either:

The Executive Officer, St Vincent's Hospital Research Office, Level 6 deLacy Building, Darlinghurst NSW 2010, Telephone: 02 8382 2075, research@stvincents.com.au. Please quote project number 08/SVH/97.

The Executive Officer, Human Research Ethics Committee, Deakin University, 221 Burwood Highway, Burwood VIC 3125, Telephone: 03 9251 7123, Facsimile: 03 9244 6581; research-ethics@deakin.edu.au. Please quote project number EC 304 -2007.

12. Reimbursement for your costs

You will not be paid for your participation in this project.

13. Further Information, Queries or Any Problems

If you require further information, wish to withdraw your participation or if you have any problems concerning this project (for example, any side effects), you can contact the researchers responsible for this project:

Emily Tunks
DPsych (Health)
School of Psychology
Deakin University
Email: ebtun@deakin.edu.au

Dr Greg Tooley
Associate Head of School of Psychology
Deakin University
Email: tooley@deakin.edu.au
DEAKIN UNIVERSITY
PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Participants

Date: 1 November 2007

Full Project Title: Increasing Australian Organ Donation Rates: A Study of Personal and Organisational Barriers to Donation, as Perceived by Health Professionals

I have read and I understand the attached Plain Language Statement.

I freely agree to participate in this project according to the conditions in the Plain Language Statement.

I have been given a copy of the Plain Language Statement and Consent Form to keep.

The researcher has agreed not to reveal my identity and personal details, including where information about this project is published, or presented in any public form.

Participant’s Name (printed) ............................................................................. .

Signature ................................................................. Date
........................................................................

Emily Tunks
DPsych (Health)
School of Psychology
Deakin University
Email: ebtun@deakin.edu.au
DEAKIN UNIVERSITY
PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Participants

Revocation of Consent Form

Date: 1 November 2007

Full Project Title: Increasing Australian Organ Donation Rates: A Study of Personal and Organisational Barriers to Donation, as Perceived by Health Professionals

I hereby wish to WITHDRAW my consent to participate in the above research project and understand that such withdrawal WILL NOT jeopardise my relationship with Deakin University, LifeGIFT or my employer.

Participant's Name (printed) ..................................................................................................................

Signature .................................................................................................. Date

........................................

Please mail or fax this form to:

Emily Tunks
DPsych (Health)
School of Psychology
Deakin University
221 Burwood Hwy
Burwood, VIC 3125
Fax: (03) 9244 6858
Appendix E

Initial Interview Guide

Semi-structured, in-depth interview question list:

Introduction
Welcome. Some of Today’s interview questions are deliberately broad, whilst others more specific but won’t take any longer than an hour to complete.

My background
No previous experience with organ donation except during my time as the Exec. Officer for transplant board at RACS. Also, have hospital experience as medical secretary and ward clark but not in the ICU.

For the development of this project, I have consulted LifeGIFT VIC and NSW, who have informed me of the procedures on their behalf as state donor coordinators.

Title of my research
Increasing Australian Organ Donation Rates: A Study Of Personal And Organisational Barriers To Donation, As Perceived By Health Professionals.

Purpose of the interview
The information that you provide will be used to develop a theoretical model for the ways in which physicians practice organ donation within Australian hospitals. Looking to clues as to whether we can even increase the donation rate beyond what is currently reported?

PLS and consent form
Highlight the issue of confidentiality.
You to keep the PLS.

<table>
<thead>
<tr>
<th>Demographic information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
</tr>
<tr>
<td>2. Gender</td>
</tr>
<tr>
<td>3. Years of experience as physician</td>
</tr>
<tr>
<td>4. Years of experience as ICU/ED physician</td>
</tr>
<tr>
<td>5. Locations/Countries of training</td>
</tr>
<tr>
<td>6. Number of hospital beds in your unit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Questions:</th>
<th>Prompts:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What does the practice of organ donation mean to you?</td>
<td>Has your personal experience with the organ donation process influenced your personal commitment to organ donation? i.e. Would you donate your family member’s organs?</td>
</tr>
<tr>
<td>2. Do you believe organ donation should nullify one’s preference for end-of-life care?</td>
<td>Donation after Cardiac Death (DCD)? Donor management? How to prioritise Ethical concerns?</td>
</tr>
<tr>
<td>3. In your opinion, what are the</td>
<td>Donor management?</td>
</tr>
<tr>
<td>Question</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4. Specifically, what are any other organisational characteristics and influences that support or impede optimal organ donation rates within hospitals?</td>
<td>Recognition/Identity/Referral process? Staff cooperation (between nurse, drs, donation and transplant staff)? Resources for donation and transplant? Cost versus benefit?</td>
</tr>
<tr>
<td>5. What procedures are mandated by your unit/organisation with respect to the procurement of consent for organ donation?</td>
<td>Requesting/communication?</td>
</tr>
<tr>
<td>6. Do these organisational policies, procedures and practices resonate with what you feel about donation and transplantation?</td>
<td>Is education of ICU staff continuous? Would you be interested in receiving greater training? If so, in which area specifically? Brain death/DCD criteria? Requesting/communication training? End-of-life care curricula? Medical students?</td>
</tr>
<tr>
<td>7. What do you believe are the roles and responsibilities of physicians like yourself in improving organ donation rates within Australia?</td>
<td>Best part of being involved? Worst part of being involved? Fear of perceived or actual conflicts of interest? Reluctance to approach? Who is accountable for achieving standards? Should and how could we recognize staff accordingly?</td>
</tr>
<tr>
<td>8. What advice do you have for new intensivists who will be involved in the donation or transplantation process?</td>
<td>Medical students?</td>
</tr>
<tr>
<td>9. Do you have any other comments? What questions do you think I may have missed?</td>
<td>• Thank you again for your time. • If you have any other comments or afterthoughts, please feel free to email them directly to me at the email address at the bottom of the PLS.</td>
</tr>
</tbody>
</table>
## Appendix F

### Ordered Situational Map: Personal and Professional Barriers to Organ Donation as Perceived by ICU Physicians

Table F1. Ordered Situational Map: Personal and Professional Barriers to Organ Donation as Perceived by ICU Physicians.

<table>
<thead>
<tr>
<th>Individual human elements/actors</th>
<th>ICU Physicians</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Organ Donation Co-ordinators</td>
</tr>
<tr>
<td></td>
<td>Designated OD officers</td>
</tr>
<tr>
<td></td>
<td>ED doctors</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Collective human elements/actors</th>
<th>Pharma and medical supply companies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regulatory bodies</td>
</tr>
<tr>
<td></td>
<td>Organ Donation Registries</td>
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<tr>
<td></td>
<td>Professional Colleges and Societies</td>
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<tr>
<td></td>
<td>LifeGIFT (VIC and NSW)</td>
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<tr>
<td></td>
<td>General Society (consent)</td>
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<tr>
<td></td>
<td>Religious groups</td>
</tr>
<tr>
<td></td>
<td>Clinical and Ethical Guidelines and Standards</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nonhuman elements/actants</th>
<th>Medical equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Medications</td>
</tr>
<tr>
<td></td>
<td>Brain death diagnostics</td>
</tr>
<tr>
<td></td>
<td>Guidelines</td>
</tr>
<tr>
<td></td>
<td>Legal definitions of death</td>
</tr>
<tr>
<td></td>
<td>Org Don Computer Registries</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Implicated/silent actors/actants</th>
<th>Patients/Donors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Social workers</td>
</tr>
<tr>
<td></td>
<td>Religious staff</td>
</tr>
<tr>
<td></td>
<td>Patients/Donors families and friends</td>
</tr>
<tr>
<td></td>
<td>Recipients and their families</td>
</tr>
<tr>
<td></td>
<td>Nurses</td>
</tr>
<tr>
<td></td>
<td>Certain cultural groups</td>
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<table>
<thead>
<tr>
<th>Key events in situation</th>
<th>National Taskforce</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>State Government hospital funding difficulties</td>
</tr>
<tr>
<td></td>
<td>DCD implementation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Discursive constructions individual and/or collective human actors</th>
<th>Nurses as better for the emotional work</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Physician Conflict of Interest concerns</td>
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<tr>
<td></td>
<td>Ethical Boundaries</td>
</tr>
<tr>
<td></td>
<td>Deceased known consent</td>
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<tr>
<td></td>
<td>Physician’s own decision to donate</td>
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<tr>
<td></td>
<td>Physicians power</td>
</tr>
<tr>
<td></td>
<td>Physician uncomfortable about requesting don</td>
</tr>
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<td></td>
<td>“Families have been through enough already”</td>
</tr>
<tr>
<td></td>
<td>Donors “Positive out of tragedy”</td>
</tr>
<tr>
<td></td>
<td>Drs duty of care (full disclosure)</td>
</tr>
<tr>
<td></td>
<td>Doctors guilt about the lost the patient?</td>
</tr>
<tr>
<td></td>
<td>Ethnic cultures as less willing stereotypes</td>
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<tr>
<td></td>
<td>Families Distrust of Doctors</td>
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<td></td>
<td>Clinical Triggers (e.g. GIVE)</td>
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<tr>
<td></td>
<td>ADAPT</td>
</tr>
<tr>
<td></td>
<td>Opportunities for donors, families and recipien</td>
</tr>
</tbody>
</table>
Table F1. Ordered Situational Map: Personal and Professional Barriers to Organ Donation as Perceived by ICU Physicians.

<table>
<thead>
<tr>
<th>Discursive constructions of nonhuman actants</th>
<th>Medical technologies as lifesaving or undignified</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brain death testing as invasive</td>
</tr>
<tr>
<td></td>
<td>Pre-mortem interventions as invasive and unneccessary</td>
</tr>
<tr>
<td></td>
<td>Confusing legal definitions of death</td>
</tr>
<tr>
<td>Political/Economic/Legal elements</td>
<td>Taskforce costs</td>
</tr>
<tr>
<td></td>
<td>Cost of dialysis</td>
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<td></td>
<td>Cost of transplantation/anti rejection meds</td>
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<td></td>
<td>Cost to retrieval hospitals</td>
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<td></td>
<td>Costs to transplantation hospital</td>
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<td></td>
<td>Cost of health professional/officer to fill role of</td>
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<td></td>
<td>Legal definitions of death</td>
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<td></td>
<td>Medical indemnity concerns</td>
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<td></td>
<td>NOK overrules AODR consent</td>
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<tr>
<td></td>
<td>Ethically lawful practice</td>
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<tr>
<td>Sociocultural/symbolic elements</td>
<td>Lack of circulation equates to death</td>
</tr>
<tr>
<td></td>
<td>Different expected and actual consent rates for</td>
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<tr>
<td></td>
<td>Ord donation seen as the ultimate &quot;altruistic gift&quot;</td>
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<tr>
<td>Temporal elements: Australian National</td>
<td>Organ donation discussion takes time</td>
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<tr>
<td>Historical Frame</td>
<td>Time away from other ICU/ED patients</td>
</tr>
<tr>
<td></td>
<td>Time of night when retrieval usually occurs</td>
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<td></td>
<td>Stand-down times</td>
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<tr>
<td></td>
<td>Aust OD rates (and past unsuccessful reports)</td>
</tr>
<tr>
<td></td>
<td>Donor management and work up time</td>
</tr>
<tr>
<td>Spatial elements</td>
<td>ICU bed resources</td>
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<tr>
<td></td>
<td>Operating room and staff availability</td>
</tr>
<tr>
<td></td>
<td>ED bed resources</td>
</tr>
<tr>
<td></td>
<td>Donor hospital staff resources</td>
</tr>
<tr>
<td></td>
<td>Transplant hospital staff resources</td>
</tr>
<tr>
<td>Major issues/debates (usually contested)</td>
<td>DCD</td>
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<tr>
<td></td>
<td>Legal useful fiction - Brain Death and it's testii</td>
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<tr>
<td></td>
<td>Categories of donor pool - esp C</td>
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<tr>
<td></td>
<td>Two legal definitions of death</td>
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<td></td>
<td>Conflict of Interest (caring for patient and donor)</td>
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<td></td>
<td>Pre/ante-mortem interventions</td>
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<tr>
<td>Related discourses (historical, narrative,</td>
<td>NHMRC Guidelines</td>
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<tr>
<td>and/or visual)</td>
<td>ANZICS guideline</td>
</tr>
<tr>
<td></td>
<td>NSW DCD guidelines</td>
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<tr>
<td></td>
<td>Individual hospital guidelines and policies</td>
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<tr>
<td>Other key elements</td>
<td>Families adjustment</td>
</tr>
<tr>
<td></td>
<td>Worldwide comparisons of DPMP (particularly)</td>
</tr>
<tr>
<td></td>
<td>Males dominant in role of ICU physician</td>
</tr>
<tr>
<td></td>
<td>Caucasian dominant in role of ICU physician</td>
</tr>
</tbody>
</table>
Table F1. Ordered Situational Map: Personal and Professional Barriers to Organ Donation as Perceived by ICU Physicians.

<table>
<thead>
<tr>
<th>Negotiations</th>
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</thead>
<tbody>
<tr>
<td>ED to Neurosurgeons (DBD)</td>
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<td>ED doctors to ICU physicians</td>
</tr>
<tr>
<td>Neurosurgeons to ICU physicians</td>
</tr>
<tr>
<td>ICU physicians to nurses</td>
</tr>
<tr>
<td>ICU physicians to NOK/Family</td>
</tr>
<tr>
<td>ICU physicians to state-based agencies</td>
</tr>
<tr>
<td>ICU physicians to OD co-ordinators</td>
</tr>
<tr>
<td>ICU physicians to dedicated hospital OD office</td>
</tr>
<tr>
<td>ICU physicians to transplant surgeons</td>
</tr>
</tbody>
</table>
APPENDIX G

Relational Analysis Situational Map: Focus on ICU Physicians’ Application of DCD Procedures

Figure G1. Relational Analysis Situational Map: Focus on ICU Physicians’ Application of DCD Procedures.