

## Point of view

# Organ donation in Australia and New Zealand – ICU perspectives

Intensivists have been aware of the benefits of organ transplantation in Australia and New Zealand since the advent of kidney transplantation in the 1960s. Furthermore, we have the unique dual responsibility of facilitating organ donation and in caring for transplant recipients.<sup>1</sup>

As transplantation has become more successful over the last 15 years and many previous contraindications overcome, the demand for organ transplantation has risen worldwide; consequently the shortfall of organs to meet the demand has become more pronounced. This has led transplant professionals, in particular, to champion endeavours to increase organ donation rates.

Over the same time period there has been a reduction in deaths from trauma in the industrialised world (including Australia and New Zealand). Previously, patients dying from traumatic brain injury constituted the largest group of organ donors and these patients were most often young and in prior excellent health. Organ donation rates in Australia and New Zealand have not changed substantially over the last decade but spontaneous intracranial haemorrhage is now the most common cause of death in organ donors. These donors are older and more often have cardiovascular and other co-morbidities.

Historically in Australia and New Zealand the request for organ donation was made by a transplant professional, usually a renal physician requesting kidney donation. Over the last 15 years this role has become the responsibility of the intensivist.

### **The intensivists role in organ donation**

Intensivists have the opportunity to provide leadership and direction in organ donation, as they are responsible for the care of the patient who may become an organ donor and also for the care of that patient's family. Furthermore, intensivists have the responsibility to ensure that the public perception of brain death and organ donation is that the process involved is of the highest standard.

There is a certain culture or "official line" surrounding brain death and organ donation. This culture is represented by three main beliefs by professionals working

in this area. These are:

- a) that organ donation is the only possible positive outcome that can occur in the setting of brain death,
- b) that for many families organ donation can assist with easing the pain of loss and,
- c) that fulfilling the wishes of the donor is the primary consideration.

Implicit in this culture is that "to donate organs" is more desirable and of greater moral value than the contrary decision, particularly if organ donation was the previously expressed wish of the dead person. This moral value judgement draws upon societal values regarding individual obligation to contribute to "community or common good" versus individual autonomy and liberty.

As intensivists we are strongly supportive of organ donation and transplantation as we have seen many patients benefit. However, we do not believe that promoting organ donation is the *primary* responsibility of an ICU specialist. Our primary responsibility is to do our utmost to restore quantity and quality of life. If that is not possible then we must do what we can to protect the dignity of the patient and his or her family. This means:

- a) frequent, honest and open communication with the family regarding the prognosis, the process involved and the family's choices,
- b) full, unbiased and timely information about organ donation,
- c) full support to the family (i.e. provide adequate time to understand and accept death, brain death and organ donation; provide adequate time for the family with the patient; provide a private room for discussions, etc) and,
- d) support the family in making a decision that is freely made and which they can live with in the future.

In this activity lies a rich source of professional satisfaction and the opportunity to reduce our feelings of anxiety and unease about our role in organ donation. Best practice does not mean achieving the family's agreement to organ donation. It means that the family was supported in the process of considering or fulfilling the potential donor's wishes and making the "right" decision for them. This "right" decision is the one that they can best live with comfortably for the rest of their lives. It is arrived at when all the professionals involved provide timely, full and unbiased information about organ donation and adequate time and support to the family such that they freely consent or do not consent.

Intensivists need to determine processes that ensure that there is a consistent, scrupulous and defensible approach to organ donation in the intensive care unit, an approach which is sensitive to the values and needs espoused by our society. It seems likely that if the fine details of these care processes are attended to (including

best practice with regard to the diagnosis of brain death, physiological support of the potential organ donor and requesting organ donation) that organ donation will be seen in a more favourable light by intensivists, patients' families and our society and that organ donation may well increase. We therefore offer the following vision for the role of intensivists in organ donation.

### **Care of the dying patient and their family**

We believe that intensivists in Australasia are, in general, comfortable with the management of the dying patient including attention to patient dignity and comfort and the avoidance of suffering.

Perhaps the most problematic issues concerns the nature and timing of a decision to withdraw brain-oriented intensive therapies (e.g. sedation, hypothermia, induced hypertension or hyperosmolality) while continuing to provide "extracranial care" which preserves the possibility of organ donation in the future. This issue is often avoided in resource documents and sometimes even explicitly interdicted. However, we believe it is nonsense to suggest that futile therapies should continue up till the point of brain death and that it is only at that time that some consideration be given to organ donation concerns.

We believe that at some time, when it is clear to all involved in caring for the patient that recovery will not occur, it is appropriate to withdraw such brain-oriented intensive therapies that were instituted at a time when recovery seemed possible, while at the same time maintaining normal extracranial physiology. We believe that we should be honest and courageous and state that such extracranial support "... is based on allowing the possibility that organ donation might occur and thus supporting previously expressed wishes of the patient or the wishes of the family after brain death".

It is our belief that it is very important from the family's point of view to ensure that the "fact of death" and "circumstances leading up to death" are both clearly understood. We have shown that an understanding of the "sequence of events that led to the death" is an important positive outcome of good communication and that "evident compassion" is the feature of that communication which is most highly valued by bereaved family members.<sup>2</sup> We suggest that it is before and during the time of extracranial support and before brain death occurs that the "circumstances leading up to death" should be clearly and simply conveyed to the family. This may require more than one family meeting and will take time for questions to arise and be answered. Ensuring that the sequence of events is well understood by the family, during this period of waiting, nearly always makes discussion of brain death and organ donation much simpler later on.

### **Timing of discussion about organ donation**

There are two schools of thought among intensivists regarding the appropriateness of discussing organ donation with the family of a potential donor prior to the diagnosis and discussion of brain death. Both perspectives will now be presented.

#### *Against early discussion*

Some believe that organ donation may be mentioned, if not explicitly requested, prior to brain death. This is practiced, perhaps for logistic purposes, in some ICUs and it does not, at least in New Zealand, seem to impact on the frequency of organ donation.<sup>3</sup> However, it is contrary to North American findings and other recommendations that organ donation requests be "de-coupled" from the meeting at which the fact of death is conveyed.

Discussing organ donation prior to determination of brain death is not consistent with ensuring that the family members understand the sequence of fatal events and the "fact of death" before they are asked to consider organ donation. Furthermore, it is only after brain death that there is a real appreciation in the "here-and-now" that death has actually occurred and that the person (and with them any possibility of recovery) has actually gone. Some believe that organ donation is more likely to be received positively after this realisation and when all remaining hope of recovery has passed.

There are occasions when the family spontaneously offer organ donation, even before brain death occurs. It is recommended that one gratefully acknowledge this offer, without accepting it, and indicate that should that be an appropriate issue to consider that it will raised again at the appropriate time. These families almost always consent when the issue is explicitly discussed after brain death but there are occasions when brain death does not occur or when there are other medical contraindications to organ donation.

Similarly, there are families who spontaneously express a prohibition of organ donation prior to brain death. In Australasian practice this is usually accepted as the last word on the subject and the family are not usually formally asked to consider organ donation after brain death has occurred. However, it can be argued that the issue should be discussed formally after brain death has occurred, when the family understands that the patient has died, not just that they may die. Indeed, in other countries (e.g. the United States of America and Spain) an expectation exists that the issue be revisited at that time.

#### *For early discussion if required*

Other intensivists believe that, at least under one circumstance, it is appropriate to raise the subject of organ donation with the family prior to brain death. This

is the setting in which the patient's condition is thought to be hopeless and the intention of the clinicians involved is to withdraw treatment, for example, extubation in the emergency department of a patient with a very severe head injury. Some intensivists will then approach the family, confirm that the prognosis is hopeless and then state that the only option, other than withdrawal of treatment, is admission to ICU for the express purpose of extracranial support in order to allow progression to brain death should this occur.

The proponents of this approach believe this to be more honest to the family and quote examples of subsequent consent to organ donation given willingly by families who have expressed appreciation for the honesty and directness.

Once again, the fundamental guiding principle should be respect for the dignity of the potential donor, their family and the potential recipient.

### **Differences in New Zealand**

There are subtle differences between Australian law and New Zealand law, which we suggest, reflect in part the differences between our two countries in the emphasis which is given to the primacy of the individual to determine his or her post-mortem fate. One of these differences concerns the "rights of the dead". In Australia the donor's decision (previously expressed and verifiable - by document or verbal evidence) legally overrides any objection that the next-of-kin might make to organ donation. There is no legal requirement in any Australian State or Territory to establish consent or objection on the part of the next of kin. We suspect however that in practice Australian intensivists would not allow organ retrieval to take place in the face of such objection, whatever the previously expressed wishes or the strictly legal situation. In New Zealand, by sharp contrast, the relevant legislation (the Human Tissues Act, 1964) requires the absence of objection by both the deceased person and the family "having made such reasonable enquiry as may be practicable". Elsewhere in this legislation it is made clear that the deceased person has no right to dictate the subsequent disposal of his or her body.

The issue of whom from the family should be involved in the request and discussion about organ donation is a vexed one. The term "next-of-kin" is simplistic and often unrealistic as "next-of-kin", "relatives" and "family" all mean different things. This difference is even more marked in New Zealand where the Maori concepts of whanau, hapu and iwi have considerable resonance even among non-Maori and where families of 30 or more are often present at the time of death. We suspect that the use of the term "next-of-kin" supports a "transplant-oriented" cultural view that implies that only next-of-kin have a legitimate right

to have a position on these matters. The language we use to describe the family at this time should be inclusive, rather than exclusive, where that best reflects the practical realities. Perhaps the term "family" is most appropriate as it allows for all types of "families" and includes persons who might not be "related" in conventional terms (by blood or marriage) but who nevertheless are acknowledged by the "family" as being part of the "family". New Zealand Law, for example, uses the term "any surviving relative" to describe the group of empowered persons who may object for the purposes of organ donation.<sup>4</sup> However, the scope of this term is not defined. We commonly find that there are many family members who are involved at the time of death and that some of these are "distant" in terms of "relationship" as conventionally classified.

We do not agree that focussing on what the dead person wanted is necessarily a means by which possible distress can be reduced - where those wishes are in conflict with family wishes such a focus can also be a source of increased distress. Similarly, the difficulties of the decision for families are not necessarily less, as is often implied, when the previously expressed wishes of the deceased are known.

The previously expressed wishes of the deceased should be discussed and considered, along with many other things, by the family. We do not believe that these previously expressed wishes should be used by the intensivist or anyone else as a "lever" to influence the family into making a decision that, although in accord with the dead persons wishes, is not right for them.

It is notable that the role of requester is being undertaken in Australia (but not yet in New Zealand) by an increasing number of transplant donor co-ordinators. Is this a role that intensivists should delegate or relinquish? Are we confident that the perceptions of the "mission" are congruent? Realising that requesting organ donation is an emotionally difficult and time-consuming task it is not surprising that intensivists may avoid this if an alternative exists. If we allow this to occur with increasing frequency we will see a further possible source of inconsistency of process and will also lose any legitimate position upon which to comment on the process.

At this time we strongly support the view that requests for organ donation should be made by the intensivist.

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## “But...?”

*“But” knows nothing of amenity or social deference. It is a contentious word and a contumacious one, delighting in mere oppugnancy, a verbal stick thrust among the spokes of the conversational wheel”*

Odell Shepard

“I would like to congratulate the authors on their presentation - *but...*” is the commonly used platform following a scientific presentation from which any comment or question may be launched. While the prelude to the word “but” may be taken by the speaker as a euphemism for disagreement it should always be taken positively. In any educational forum, questioning is mandatory. To the true scientist eternal truth does not exist. It is the ability to ask the correct questions that deepens our knowledge, not the answers, as they will never be absolute.

To learn about a problem, facts and concepts must be probed continually, and in this context “but” is a vital word. While, the preamble (and the word “but”) should

be meant and taken with charity, occasionally it is an introduction to a question or a comment that may reveal more about the questioner than the topic under discussion. A good chairman is useful to redirect the focus in such circumstances.

As well as in the open scientific forum, in any scientific institution, the head of a department should foster constant questioning and encourage the alternate points of view, even if this requires a robust review of his or her own ‘pet’ theories. The active and vibrant departments always seem to have individuals who lead with sincerity, enthusiasm and humility, describing their colleagues as ‘wizards’, always talking about ‘we’ and usually considering their own input into the various studies underway in their own departments as minor.

Nonetheless, there are caveats. While the future may belong to the sceptic, it certainly does not belong to the cynic. Scepticism pursues evidence and is built on a genuine honesty for precision and fidelity; cynicism reflects more an arrogance of ignorance and seeks to destroy the virtue of any wish to seek the truth. Moreover, while Max Perutz (the discoverer of the structure of haemoglobin) may believe that “In Science you don’t have to be polite, you only have to be right”; questioning with charity, courtesy and good will, allows the necessary questions to be asked without anyone losing face.

At all stages, different points of view must be encouraged. New attitudes and opinions foster creativity, initiative and (particularly relevant in our era) change. In this sense, problem finding or creative observation should be rewarded if not with an encouraging comment from our senior people at least with a friendly smile. Learning and seeking truth is not a subversive activity; it only occurs when there is freedom of thought, ideas and expression.

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# Development of audit and quality assurance in an intensive care unit. A smaller hospital perspective

Palmerston North Hospital (PNH) is a provincial hospital with a level II intensive care unit (ICU) facility.<sup>1</sup> Guidelines for quality assurance were developed for the unit with reference to the Faculty of Intensive Care, Australian and New Zealand College of Anaesthetists (FICANZCA) policy document minimum standards for intensive care units<sup>2</sup> and an earlier policy document.<sup>3</sup> The guidelines were developed in an attempt to formalise a quality assurance programme and to improve the standard of care in our ICU.

Whilst quality and safety have always been valued and pursued in medicine, formal initiatives to assure their presence in clinical practice have only been a relatively recent innovation.<sup>4,5</sup> The development of quality assurance policies, together with certain legislative requirements and the promotion of clinical governance,<sup>5</sup> has placed the onus upon clinicians to participate in quality assurance activities even though clinical data confirming the value of these activities are limited.<sup>6</sup> It was felt that adapting quality assurance activities to suit local needs and circumstances would not only improve care at our regional ICU but would be more acceptable to reviewing bodies compared with other formats that had been established for larger units.

## Rationale for an audit programme

The term 'audit' may be used to encompass a breadth of activities,<sup>7</sup> but it is an integral part of any quality assurance activity.<sup>8</sup> However, the overriding motivation for a clinical audit is the desire to achieve quality and excellence,<sup>7,9</sup> and it has become an expected activity in this pursuit, although other reasons have also been proposed, including complying with accreditation guidelines from major governing bodies.<sup>2</sup>

In New Zealand there are also legislative incentives for the medical practitioner to participate in audit activities. The Medical Practitioners Act 1995 contains regulations that require the practitioner to be recertified in the area of his or her vocational registration, or to undertake audit activities if one practices under 'general oversight'.<sup>10</sup> The Royal Australasian College of Physicians and FICANZCA maintenance of professional standards (MOPS) programme is accepted as a means by which one meets these requirements, thereby necessitating involvement in audit. The forthcoming

Health Professionals' Competency Assurance Bill<sup>11</sup> will also require quality assurance activity with audit. An audit also provides a mechanism for supporting resource requests (e.g. equipment, maintenance contracts, personnel), or a means whereby current resources can be justified,<sup>12</sup> and provides data for those interested in research.

However, control of the audit process is important to ensure that the appropriate aspects of the service are audited, and to ensure that the output of the audit is accurate.

## Suggested components of a prospective audit

The audit should not occur in isolation and must become an integral element of clinical practice. To achieve this in a smaller rural hospital ICU we reviewed five aspects.

*Motivation.* Some of the factors that may encourage personnel to be actively involved in the audit process have been previously considered. However, it is often difficult to prepare strategies and design guidelines that will motivate the diverse group of medical professionals who work in the ICU. Successful audit requires co-operation between all medical staff (including clinicians who have a part-time practice within the hospital or the ICU) and co-operation from the ICU nursing staff.

*Areas of audit.* Not all facets of intensive care practice will lend themselves readily to audit. Ideally topics to be audited must be important, measurable or observable and able to be improved or modifiable. It is also important to avoid bias in the selection of topics or issues to be audited, as it is often easy to shy away from topics that may be provocative or confirm an unsound or substandard practice.

*Resources.* Just as an audit may permit additional resources to be obtained, so resources are also required to conduct an audit. Additional resources include interested (and motivated) personnel to plan and conduct the audit, computer hardware and software (e.g. information systems) and support from a biostatistician. It is important that the audit planner or designated quality assurance co-ordinator is given sufficient non-clinical time.

Sufficient patient numbers are also required to audit certain conditions effectively, as smaller intensive care units often find it difficult to audit some specialised aspects of care (or justify management) of disorders which are infrequently encountered.

*Data management and interpretation.* Audit form design requires careful consideration to ensure that the issue or topic in question is clear and can be answered accurately and that all pertinent information can be gathered. To this end all audit forms must be carefully and accurately completed (and returned) to allow meaningful interpretation. The data then needs to be

interpreted in light of accepted critical care medicine standards and with due consideration of current performance standards in other Australasian intensive care units.

'Closing the loop'. There needs to be a suitable forum for presentation and discussion of the audit findings to allow implementation of any quality improvement (QI) measures that may arise. It is also important to be able to present the findings in an appropriate format when 'resource' implications are identified. Cyclical 're-audit' (i.e. auditing topics that have been previously audited) may also be beneficial to

monitor the implementation of previously recommended QI measures.<sup>9,13</sup>

#### Quality assurance initiatives undertaken at the Palmerston North Hospital ICU

To date, a number of quality assurance initiatives have been employed locally. The three most important have been the development of a comprehensive computerised data-base, the establishment of a regular prospective audit, and regular medical staff quality assurance (QA) meetings.

**Table 1. Prospective Palmerston North Hospital intensive care unit audit (January 1999 - July 2000)**

Audit subject	Summary of findings	Outcome	Specific problems
Tracheostomy	Average delay of 43 hr from decision to completion. No percutaneous tracheostomy done in audit period.	Review of tracheostomy selection process with reemphasis on percutaneous.	Small numbers (only 8 tracheostomies in the audit period).
Intensive care unit LOS <12 hours	17% admissions LOS < 12 hr. Of these 47% transferred to tertiary services, 6% died. Appropriateness of admission for remaining 47% reviewed.	Admission criteria reviewed.	Small numbers (only 99 patients admitted overall during this period). Leaves a very small heterogeneous group to determine appropriateness of admissions <12 hr.
Patients aged ≥75 years	13% admissions aged ≥ 75 years. Mean LOS 7.1 days (median 3 days). 36% ICU mortality (cf. 13% overall for the same period). Therapeutic limitations and/or withdrawal of support occurred in all deaths.	Acceptance remains of the need for intensive care unit admission in the elderly, as future outcomes may be different.	Small numbers (only 108 patients admitted overall during this period).
Blood test ordering	Excess-ordering of some tests, particularly liver function tests, coagulation profiles and cardiac enzymes.	Development of guidelines.	Hospital-wide test-ordering system changed significantly soon after audit completed.
Blood product usage	119 units of RBC and 106 units FFP recorded as used in audit period. Median overall values: pre-transfusion Hb 91 g/L; post-transfusion Hb 108 g/L; 2.5 unit transfusion.	Formalisation and downward revision of guidelines for 'transfusion trigger' Hb level.	Cross-reference with the blood bank suggests that not all transfusion episodes in intensive care unit were recorded.
Frequency of review of intensive care patient by parent-team specialist.	See opposite.	Revision of system for audit form completion and collection.	Barely 50% of all patients had forms returned. Blank forms (i.e. no review) were thought unimportant at bedside, and so discarded. It is likely that some reviews were also unrecorded.

\*LOS = length of stay, RBC = red blood cells, FFP = fresh frozen plasma, Hb = haemoglobin

*Database.* A customised locally developed computerised database of all ICU admissions has been kept in the PNH ICU since 1987. It is currently formatted in Microsoft® Access and routinely produces monthly reports of occupancy, deaths, transfers and all long-stay patients. These reports are provided to the QA meetings and are also used for retrospective research.

*Prospective audit.* A formal audit commenced in January 1999, initially in a quarterly format with a summary of topics to date, associated findings, outcomes and problems encountered (table 1). It is likely that longer audit periods (e.g. half-yearly or annual) will be used to increase numbers.

*Quarterly QA meeting.* A meeting of ICU senior medical staff and charge nurse (or delegated representative) is held quarterly. It focuses on reporting, feedback and discussion concerning the preceding audit and development of any subsequent response. It also incorporates the development of guidelines for clinical management. To date only a limited morbidity and mortality review has been undertaken. The meetings are presently held 'out of hours' and at private residences of those involved. They have been enthusiastically received.

### 'Smaller' hospital ICU problems with audit and quality assurance

While the PNH ICU has participated in Australian incident monitoring study in intensive care (AIMS-ICU),<sup>14</sup> recent funding difficulties have left us uncertain as to our ability to continue to support this programme. Meanwhile the AIMS format has been used internally for incident monitoring. There also exists an in-house hospital-wide incident reporting system for workplace accidents, although this, together with the hospital's Risk Management unit, has had little tangible impact on the quality of care in our ICU.

In association with accreditation of our hospital by the New Zealand Council on Healthcare Standards (NZCHS), the use of clinical indicators, as developed by Australian Council on Healthcare Standards,<sup>4,15</sup> was proposed. Difficulties with identification and implementation of ICU clinical indicators considered to be relevant locally have hampered introduction of these indicators.

Aside from the issues of unit size, number of staff, and patient numbers (< 400 admissions per annum), it is unlikely that the problems we encountered in our ICU are peculiar to the smaller hospital. Nonetheless, the small numbers of patients, and their relative heterogeneity do present difficulties for a rural hospital ICU.

### Conclusion

It is difficult to define the nature of quality. Whilst there can be universal professional standards<sup>2,9</sup>, no

generic definition of quality will apply across the breadth of critical care practice. Quality is often determined by a composite of local expectation, intuitive appraisal, international and/or collegial criteria and certain situational imperatives, combined with specific validated quality assessment instruments where applicable.<sup>16</sup>

The reasons for introducing an audit and our experiences following the initiation of an audit QA programme in a provincial ICU practice are described. Aside from a universal need for accurate form-filling and completed returns, the problems encountered in our ICU were principally those associated with small patient numbers. Lengthening any given audit period may partially address this problem. It is anticipated that by systematic evaluation of our clinical ICU practice, both an assurance and improvement of clinical quality can be obtained.

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