Organ donation

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Introduction
In Australia the organ and tissue donation program is run nationally by the Organ and Tissue Authority (OTA). The OTA works with different states and territories, as well as the community sector, to deliver the National Reform Program. The National Reform Program was started by Kevin Rudd in 2008 in the hope it would increase organ and tissue donation as well as transplantation outcomes in Australia. One of its key initiatives was to have specialist hospital staff and systems dedicated to organ donation. The OTA provides leadership and collaborates with the states and territories as well as specialised hospital staff. All the organisations and staff compromise the Donate Life Network. Organ donation rates vary internationally and regionally. They are assessed by comparing the number of donors per million population.

1. How does Australia rank?
- Transplantation outcomes in Australia are second to none, but organ donation rates are low compared to other developed countries
  - Spain leads with about 39 donors per million population
  - Australia in 2015 had 18.3 donors per million population and was ranked 18th internationally
- In 2016, there was improvement with up to 20.8 donors per million population, however international rankings have still not been released
- As a state, NSW ranks behind all other states with 17.7 donors per million population
- It is important that every effort is made to identify every possible donor and that we offer organ and tissue donation to all these families

2. How does the organ donation process work?
- The process starts when a member of staff recognises a potential donor
- The patient has to be intubated and the medical team looking after that patient must be planning to withdraw active therapy or starting to think about discussing end-of-life care with the patient/family
- Any hospital staff member can call the on-call donation staff and alert them regarding new possible donors
- The donation staff work with the medical team and do registry checks; it is important to obtain information:
  - About prior consent to organ donation or refusal
  - About the patient and the possible pathway for donation, i.e. brain death or DCD
  - From the medical team regarding suitability of patient for donation
- The conversation of donation takes place only after a medically poor outcome has been established

3. What are the categories of organ donation?
- Two main pathways for deceased organ donation:
  - Brain death pathway – 75% of deceased donations are via the brain death pathway
  - Circulatory death pathway
- There is also living organ donation – for example, giving an organ to a living relative
  - There are paired exchange programs where a live donation can be made to another person with the agreement that their relative will donate to someone else as well – this is often done with patients whose family members are not a match
Case 1 – You are a junior doctor in the Emergency Department involved with a trauma team. You have a 19-year-old male with a brain injury after a high-speed motor vehicle accident (MVA).

1. How do you approach the subject of donation with the father of the patient who is in attendance and asks you about organ donation?
   - Need to screen this patient and approach the family at an appropriate time
   - In this case, the father is already thinking about organ donation but as the doctor you should slow the conversation down – all avenues of treatment have to be explored before discussing organ donation
   - If this situation occurs, start by thanking the family for the generous offer and explain that if the situation arises that the patient is eligible to be an organ donor, that the family will be contacted
     - Also let staff know and document clearly that this was the wish of the family

2. If the patient has been in the Intensive Care Unit (ICU) for several days, who should approach the family regarding donation?
   - Some ICUs have trained requesters for organ/tissue donation
     - Training is being undertaken in many hospitals to train staff to have conversations with family members about donating
     - These conversations do not occur frequently as most patients are not suitable – therefore it is hard to gain experience with these conversations. Having designated requesters means there is a small group of staff who are very experienced in this area
   - The conversation may be led by the intensivist or may be a collaborative model where the intensivist/nursing staff introduces the designated requester who then starts the conversation and answers questions from the family – the intensivist may stay or leave after introducing the requester
   - In the Emergency Department, it would be great if staff could flag the patient to the donation team, however at this point it is not appropriate to speak to the family

3. How do you determine if the patient is potentially an eligible donor?
   - At the age of 19, the patient could be a multi-organ donor however there are many considerations including cancer, intravenous drug use etc. that could mean the patient is not eligible
   - A detailed medical history is required and blood tests including HIV/hepatitis C etc serology need to be sent
   - In an isolated head injury, this patient could donate the lungs, heart, kidneys, liver (whole or split), pancreas, intestines, heart valves, corneas, bone (e.g. femoral heads), skin
   - Up to 10 or more people can benefit from a multi-organ donator

4. How does organ donation occur?
   - In the brain death pathway:
     - For example, this occurs by brain injury from trauma, subarachnoid haemorrhage or hypoxic injury
     - The pressures in the brain continue to rise and, due to having an enclosed skull, the blood supply to the brain eventually ceases and causes brain death
     - The patient is on a ventilator, providing oxygen and taking away carbon dioxide.
     - The patient would not survive without ventilation
     - The patient has to be examined and diagnosed as brain dead – there are strict criteria for this
     - If a clinical examination cannot be performed, a radiological examination can confirm brain death
   - In the circulatory death pathway:
     - The heart stops beating
     - The patient usually has a poor neurological prognosis, and usually once life-sustaining therapy is removed (vasopressors/ventilator), then they will die very quickly
     - In these patients, their heart must stop before organ donation staff can act
     - There is a very short window to get the patient to theatre and retrieve organs
   - The dead donor rule – no one working in donation can hasten the patient’s death
     - This protects donor staff from litigation
     - This means the patient has to die on his or her own – either by brain death or by circulatory death
5. How do recipients get selected?
- Organs are allocated on an as needed basis
- It also depends on blood-and tissue-typing
- If a family agrees to donation, they cannot dictate the type of patient that receives the organs/tissues

Case 2 – You are working in the Intensive Care Unit (ICU) and a 65 year old deteriorates following a massive stroke 3 days ago. You are asked to organise a family meeting to discuss prognosis and direction of care.

1. Is this an appropriate time to discuss organ donation?
- It is a little early because the prognosis and direction of care are yet to be discussed
- The consultant may have thought about donation and discussed it with the neurologist/neurosurgeon
- Once everyone is convinced this is a bad prognosis, then the conversation can be made
- A registry/suitability check may be made at this time so that the family’s time isn’t wasted later on – but no conversation with the family is made at this point

2. What role do families play in organ donation decisions?
- They play the most important role in final decision making
- Designated requesters provide families with information regarding organ and tissue donation so they can make an informed and enduring decision for their loved one
- The conversations can be grouped into:
  - Families that know their loved one’s wishes – these are the easiest conversations
  - Patients that have registered with the organ donor registry or previously the roads and maritime registry – the family may or may not know about this
    - When the registries are checked and consent is found, the conversation is much easier
    - 89% families support organ donation if their loved one has indicated it
    - Families can override this
  - Patients that have registered refusal of donation
    - The conversation is easier, however families can override that decision
    - This can only be changed if the family can remember an exact conversation with the patient, where the patient has stated that they want to change their mind and would like to donate
  - Families that do not know the patient’s wishes and there is nothing registered
    - Requesters help the family try to decide what the patient would have wanted, explore what their feelings might have been and decide if organ donation will take place

3. What support is provided to the families?
- The families get a lot of support from a team of staff including: bedside nursing staff, social worker, chaplain, other support groups depending on their cultural background, bereavement counselor
- The bereavement counselor contacts families two days after the retrieval surgery and provides a small amount of de-identified information about who received the tissue/organs
  - Families often use these little bits of information in the patient’s eulogies
  - The bereavement counselor can also transmit information from the recipients to the donor’s families

4. What do you do if you cannot contact the family of a predicted donor?
- The social worker contacts all known contacts of the patient including lawyer, accountants, nursing home, priest, GP etc to find family members
  - Organ/tissue donation is obtained from the most senior next of kin under the Human Tissue Act
- If no family member is found the donation can only take place if the patient had registered as a donor – this is taken as legal consent

5. If anyone has any further questions about donation, where can they find information?
- There is lots of information online and in hospitals
- All hospitals have an on-call staff member able to provide information regarding donation of your patients
- Donate Life website provides abundant information and runs courses that you can attend
- There are 18 donation specialist medical (DSM) officers in NSW who can be contacted to ask about donation
6. Take Home Messages
   - Everyone should register online to donate – AODR (Australian Organ Donor Registry)
   - Once someone’s wishes are registered, please let your family know your wishes to make the conversation easy if it is ever required

References
Organ and Tissue Authority (Accessed: https://register.donatelife.gov.au/)