Improving the process of deceased organ and tissue donation: a role for donation physicians as specialists

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The disparity between the demand for transplants and organ availability has been identified as a worldwide public health concern. In Canada, donation rates and access to transplantation differ between provinces, and deceased donation rates have remained stagnant and rank well below other countries with advanced transplantation services.[1] At the end of 2011, there were 4543 Canadians on transplant waiting lists. In 2010, 16% of transplant candidates waiting for a kidney, pancreas or both died while on the wait list; this figure was 19% for lung transplant candidates, 22% for liver transplant candidates and 24% for heart transplant candidates.[1]

In 2008, Canadian Blood Services was mandated by the provincial and territorial governments to develop a plan for an integrated system that would improve donation and transplantation in Canada. After extensive consultation with experts and members of the public, Canadian Blood Services submitted recommendations that included the implementation of "donation physician specialists."[2]

The published literature for this evolving area of subspecialty expertise is scarce. Donation physician specialists exist in Australia, the United Kingdom, Spain and parts of the United States. Italy and Croatia have recently adopted similar models.

Donation physician specialists have a focus on and enhanced expertise in organ and tissue donation. The role varies from direct donor care to program administration. Most are involved in education, training, quality improvement and advocacy. Internationally, most are critical care physicians. In the UK, Spain and Australia, they have been implemented throughout the tertiary care hospital system and receive supplemental training in the sequence of care ranging from imminent death to death determination to organ use.

In Spain, "transplant coordinators"[3] take a front-line role in all aspects of donor care, including donor detection, evaluation, death diagnosis, consent, donor management, organ retrieval and allocation logistics. They provide training for critical care staff and other hospital personnel. At the University of Pittsburgh Medical Center in the US, a consultant service, comprising a specialized group of intensivists, is available at all times to provide direct donor care in all intensive care units. In coordination with the local organ-procurement organization, their role includes evaluation and diagnosis of brain death, donor management and communication with the transplant team.

In contrast, in the UK, donation physician specialists (referred to as clinical leads for organ donation[4]) promote donation through the provision of knowledge, leadership, education and administrative guidance. They do not attend to every donor, but they work closely with the nurse donor coordinators who provide direct donor care. As administrators, donation physician specialists provide clinical oversight for performance reports and audits, work with retrieval teams to optimize the process, and educate staff involved with donor care. The Australian program closely resembles that in the UK.

Donation physician programs are associated with improvements in deceased donation rates. In Spain, the role is credited with increasing the donation rate to more than 30 donors per million population; this is one of the highest rates in the world.[3] Similar structures and results have been reported in Italy.[5] In Australia and the UK, increases in donation performance (56% in Australia[6] and 47% in the UK over 5 yr[7]) have been attributed to recent reforms that included the introduction of system-wide donation physician specialists. It is unclear if these improvements are causal or temporal associations because they may have coincided with other investments in donation

Key points

- Donation physicians are specialists with a focus and enhanced expertise in organ and tissue donation.
- Their role may vary from direct donor care to program administration, education, training, performance measures, quality improvement and advocacy.
- In other countries, system changes that included donation physician specialists have been associated with increased rates of donation.
- Implementation of donation physician specialists has been recommended by the Canadian Blood Services to improve donation and transplant systems in Canada.

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systems, such as public awareness campaigns, intent-to-donate registries, donor nurse coordinators and performance metrics with system wide death audits that identify gaps in practice. At the University of Pittsburgh Medical Center, the implementation an intensivist-led organ-donor support team significantly increased the number of organs transplanted per donor from 31% to 44%.[8]

Most donation physician programs are government funded. In Spain, program funding is tied to the performance of the program based on potential and actual donors cared for, and the number of tissues and organs donated. In contrast, in Australia and the UK, funding is guaranteed independent of donation performance. Performance-based funding may create real or perceived conflict of interests. Given that public trust is a cornerstone of transplant systems, it is important to consider how the allocation of funding to donation physician programs might be perceived by the public. In many Canadian provinces, fixed hospital reimbursements are provided to support donor care. Australia and the UK provide hospital reimbursement if potential donor care is provided independent of outcome and can be used by the hospital at their discretion to cover donor costs and support donation activities in the hospital.

The potential for real or perceived conflicts of interest associated with the dual role of donation physician specialists who are also intensivists has been identified a challenge. In Spain, such a conflict is currently unavoidable, and disclosure to the patient's family is recommended to prevent these conflicts from causing harm. Some members of the UK Intensive Care Society have expressed reservations,[9] and an independent UK Donation Ethics Committee has addressed the issue of the dual role.[10] Most programs demand separation between the roles of donation team members in the provision of end-of-life care in the intensive care unit.

A recommendation from expert consultation on donation and transplantation cohosted by Canadian Blood Services and the Canadian Critical Care Society in 2011 is that there be clear definition and separation of the roles of all people involved in the donation and transplantation system and transparency through full disclosure of roles and responsibilities to families and other professionals. Funding mechanisms should support giving patients an opportunity to donate without creating incentives to increase the number of organs donated through undue pressure.

The integration of donation physician specialists with donor coordinators and hospital teams has the potential to improve the process for all forms of deceased donation. Any formal training curricula and certification in the future should proceed in collaboration with professional societies and colleges.

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