



Environmental Scan of Professional Education for Donation

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I. Introduction

Currently, professional education programs for deceased donation in Canada are developed and delivered by provincial or regional organ donation organizations (ODOs), professional societies, donation champions, tissue banks, and transplant programs. This structure results in inconsistency with respect to program content, depth at which the material is covered, and health care disciplines that receive training. Though some sources of content are developed nationally and leveraged by individual ODOs, the fragmented delivery may result in greater costs and resource use than a single national strategy would. Furthermore, a lack of consistent assessment, evaluation, or learner certification presents a barrier to ensuring nation-wide competency.

Deceased donation relies on trust between the institution, professionals caring for the potential donor, and the family of the potential donor. Thus, it is imperative that these health care professionals (HCPs) act with a high level of competency and consistency in material consent. Research has found that families that decide in favour of donation are unlikely to regret their decision, while regret is more likely among families that decide against donation.¹ Thus, competency in donation practices allows for improved quality of end-of-life care, which better accommodates the wishes of potential donors and their families.

A recent needs assessment of deceased donation education found that intensive care unit nurses, emergency department (ED) nurses, and ED physicians reported low levels of comfort with donation². Thus, there is a need for expanded, high quality professional education for donation.

I.1 Objectives

Canadian Blood Services undertook this environmental scan to help support the development of a coordinated Canadian national strategy for professional education around deceased donation. The objective of this national strategy will be to improve knowledge and competency around donation practices and to increase support and create a culture of donation in the health care system in order to truly embed deceased donation into end-of-life care practices.

The objective of this document is to report the findings of a survey of Canadian and select international ODOs, focused specifically on the following areas:

- How is the curriculum developed?
- What is the nature of the content? What sources are used?
- Which processes, venues, and media are used to reach the intended audience?

¹ Rodrigue, J. R., Cornell, D. L., & Howard, R. J. (2008). The Instability of Organ Donation Decisions by Next-of-Kin and Factors That Predict It. *American Journal of Transplantation*, 8(12), 2661-2667.

² National Deceased Donation Education Program for Health Professionals: A Needs Assessment. Canadian Blood Services. 2016.

- How are programs evaluated? How are learners that take part of training evaluated?

This report seeks to provide a baseline of current professional education practices to inform the design and development of a deceased donation professional education program that leverages previous success in Canada and other high-performing jurisdictions to meet the needs of the Canadian organ and tissue donation and transplantation (OTDT) community.

II. Methods

II.1 Sources

Each of the ten Canadian ODOs was surveyed as part of this environmental scan. Additionally, there were eight international ODOs surveyed, selected for their record of high donation rates and activity in professional education. The survey was conducted to the following programs between 2015.08.03 to 2015.09.04.

- Canada
 - Alberta
 - Human Organ Procurement and Exchange Program (HOPE)
 - Southern Alberta Organ and Tissue Donation Program
 - BC Transplant
 - New Brunswick Organ Donation Program
 - Nova Scotia Organ and Tissue Donation Program
 - Organ Procurement and Exchange of Newfoundland and Labrador (OPEN)
 - Organ Procurement Program (Saskatchewan)
 - Transplant Manitoba
 - Transplant Quebec
 - Trillium Gift of Life Network (Ontario)
- International organizations
 - Australia – Organ and Tissue Authority (OTA)
 - Spain – Organización Nacional de Trasplantes (ONT)
 - United Kingdom (UK) – National Health Service Blood and Transplant (NHSBT)
 - United States
 - LifeCenter Northwest (Alaska, Montana, North Idaho, and Washington)
 - OneLegacy (Los Angeles)
 - LifeSource (Minnesota)
 - Philadelphia Gift of Life (Pennsylvania, Southern New Jersey, and Delaware)
 - New England Organ Bank

II.2 Data collection/questionnaire

The questionnaire was developed in consultation with Deceased Donation Professional Education Working Group (Appendix 12) and was sent to the selected ODOs by email.

The scope of the questionnaire was:

- Intended audience for education
 - Staff internal to ODOs (e.g. coordinators, donation physicians employed by ODOs)
 - External staff, including health care practitioners (HCPs) that have direct roles and responsibilities in organ donation and referral (e.g. critical care and ED nurses and physicians);
- Education about deceased organ donation within the hospital setting
 - Include tissue donation when it aligns with education provided for organ donation, within hospital;
- Adult and pediatric donation cases;
- Availability of education in French and English;
- Initiatives/programs performed within the last 5 years;
- Specific training and processes used for Donation Physicians;
- Supporting tools used, including social media and internet applications;
- Sources of content for curriculum development.

A follow up phone interview was conducted with a contact person from each ODO to clarify terminology and complete any ambiguous or missing answers from the questionnaire.

II.3 Limitations

While this process sought to collect information from surveyed ODOs in a structured manner, the quality and depth of the responses was limited by several factors:

- Disparity in the depth of knowledge and role within their ODO of the respondent/interviewee;
- Variability in the level of detail provided in response to the questionnaire and potential for omission of information;
- Time lag between collection of responses and preparation of report (e.g. Nova Scotia reported having two donation physicians, but these positions no longer exist)
- Variability in terminology, position titles, or other semantic issues complicate interpretation;
- No secondary validation of accuracy of responses.

One consequence of the above limitations is that it is difficult to determine, in cases of missing or insufficient information, whether the respondent ODO does not engage in

certain practices, or whether the interviewee simply failed to share the full breadth of education programs offered.

III. Summary of Environmental Scan

Each of the organizations surveyed deliver professional education to HCPs potentially involved in donation. Australia, Spain, and the UK, are served by federally funded, national organizations that offer a consistent approach to education across their respective jurisdictions. By contrast, Canada and the United States have a multitude of provincial or regional organizations that vary in the content of educational programs offered, the methods by which they are delivered, and the disciplines of HCPs and stakeholders for which they are intended.

III.1 Development of education content

Curriculum development – International

The UK, Spain, and Australia each have national ODOs: the National Health Service Blood and Transplant (NHSBT), the Organización Nacional de Trasplantes (ONT), and the Organ and Tissue Authority (OTA), respectively. In the UK, education programs are developed by the NHSBT and are implemented, in part, by specialist nurses – organ donation (SN-ODs – equivalent to organ donor coordinators in Canadian provinces) and clinical leads – organ donation (CL-ODs – equivalent to Canadian donation physicians) that tailor the programs to accommodate local needs. In Australia, the OTA, via regional DonateLife Agencies, develops professional education and awareness programs that are administered by hospital-based medical and nurse specialists. In Spain, the National Council on Donation and Transplantation, whose membership consists of the Director of the ONT and the directors of the regional authorities, determines the professional education priorities each year. ONT then directly organizes the courses and activities intended for coordinators, ED doctors and nurses, ICU doctors and nurses, and other HCPs.

Curriculum development – Canada

In Canada, as in the United States, each provincial or regional ODO sets its own educational program and priorities and the respective scopes of their professional development programs vary significantly.

Key Message:**Benefits of local development:**

- Meets provinces/ODOs where they are
- Accommodates local needs (e.g. language, demographics)

Benefits of national development:

- Standardization
- Provides clarity in the expectation of current/best practice information
Reduces redundancy in resource use
- Avoids confusion for HCPs on where to seek relevant information
- Facilitates measurement
- Advances legitimacy and relevance of professional education goals

Content – International

Nearly all international and Canadian ODOs provide an overview of the donation and transplantation processes as part of their training. All training programs offered practical knowledge, such as clinical triggers and identification of potential donors, inclusion and exclusion criteria, donor management, the referral process, and consent discussions.

All international ODOs cover legal and ethical considerations, though coverage of this topic was limited to internal staff by LifeSource and Philidelphia Gift of Life. All international ODOs, except Spain, included the surgical DCD process, and pediatric cases were covered by all except the UK and Australia (Table 2).

Content - Canada

In Canada, 9 of 10 ODOs cover legal and ethical considerations in deceased donation for their internal staff while 6 of 10 include the latter in training for external staff (Tables 1). Exclusion criteria is omitted by 3 of 10 Canadian ODOs for external staff in favour of encouraging staff to refer all potential donors (Table 1).

Procedures for donation after neurological determination of death (NDD) and ancillary tests for NDD were included universally in the curriculum for internal staff and frequently (7 of 10 Canadian ODOs) for external staff. Donation after cardiocirculatory death (DCD) was also frequently covered for internal staff; however this topic was only included for external staff by 4 of 10 Canadian ODOs while pediatric DCD was only covered by 1 of 10 ODOs (Table 1).

Source material

All ODOs surveyed derive content from research publications, reviews, and material from professional associations for professional development programs. Virtually all ODOs also reported leveraging case reviews as an opportunity to translate knowledge to practice (Tables 3 and 4).

International

Among the international ODOs, the UK and Australia have each produced national guidelines or protocols for practice and ethics around donation, including DCD. ONT in Spain also produces consensus documents, which are reviewed every five years. By contrast, the ODOs of the United States do not have national guidelines and educational content and practices vary as a result.

Canada

In Canada, the provincial ODOs each take a separate approach to professional education; however, all Canadian ODOs, except Alberta, cited use of guideline and best practice documents developed by Canadian Blood Services and Canadian professional associations.

Key Message:

Nationally or regionally developed guidelines, that take into account local legislation, cultural norms, and logistical challenges, and which are supported or endorsed by relevant professional associations, may improve quality of care and enhance uptake by external health care professional involved in donation.

Funding

Information concerning sources of funding for professional education was not available for all ODOs surveyed.

The ONT in Spain reported an annual budget of approximately €1M. Funding for education in the UK is provided by the NHSBT. In Australia, the OTA provides funding for the regional DonateLife Agencies that deliver education both to internal staff and external stakeholders. None of the ODOs in the United States provided information on funding.

In Canada, BC Transplant is funded through the BC Ministry of Health and is an agency of the Provincial Health Services Authority. Trillium Gift of Life Agency (TGLN) is a not-for-profit agency of the Government of Ontario. No other Canadian ODOs reported their structure of sources of funding.

III.2 Training for ODO staff

All ODOs surveyed engage in training of newly hired internal staff (Table 5), which may include organ donor coordinators, residents, and donation physicians.

Coordinators – International

In the UK, specialist nurses, known as SN-ODs, complete two weeks of module-based classroom education followed by three days of simulation.³ To ensure consistency, recruitment and training is done in groups rather than one at a time in a piecemeal fashion. Ongoing education includes webinars where case reviews, best practices, and new strategies are discussed.

ODOs in the United States reported extensive formal training upon recruitment of new coordinators (Table 6). New hires at LifeCenter Northwest and Philadelphia Gift of Life receive at least three months of orientation. At New England Organ Bank, new coordinators undergo five days of classroom education, followed by ongoing on-the-job training over the next several months via case studies, reading assignments and, advanced courses.

Coordinators - Canada

Preceptorship programs, whereby new ODO staff members shadow a senior coordinator, are used by 4 of 10 Canadian ODOs, following a short orientation, and review of SOPs and training manuals (Table 7). Training takes 3-9 months to complete and, in some cases, involves completion of self-directed online modules. In Quebec, training is tailored based on the discipline and experience of the learner and performance is evaluated in a module format. Less formal training is offered for internal staff in Saskatchewan, which are required to read all SOPs but are not formally trained or assessed.

Ongoing education and professional development is provided by many ODOs for their staff. Manitoba requires yearly updating of training to maintain competency, whereby coordinators perform a demo of consent and simulate quarantine of an organ and kidney retrieval. OPEN, in Newfoundland, also offers ongoing training and evaluation, whereby staff members complete a checklist demonstrating review of all policies and other training material.

Key Message:

Training for donation coordinators varies between jurisdictions, from reading SOPs and completing checklists, to extensive formal classroom training combined with preceptorship over the course of many months (Table 3).

Post-training assessment in Canada is inconsistent making it difficult to ensure competency.

Donation physicians – International

³ UK Transplant Professional Development Programme. Retrieved from: http://www.uktransplant.org.uk/ukt/about_us/professional_development_programme/professional_development_programme.jsp

In the UK, donation physicians, known as CL-ODs, receive two days of formal education, including role-playing, lectures, and small group discussions. In Australia, donation physicians complete the OTA's orientation program and professional education package. They also receive training from their regional agency. Donation physicians in Spain complete a five-day general course on identification and management of potential donors, a one-day seminar on communication in critical situations, and a further course on donation and transplant, including DCD.

Donation physicians - Canada

In Canada, there is significant variability between organizations in training for donation physicians; indeed some organizations do not have formal donation physicians and instead rely on local champions that serve as advocates and local content experts (Tables 5).

In Ontario, TGLN offers training to donation physicians consisting of videos, online slide presentations, and monthly teleconference rounds, which may cover challenging cases or feature guest speakers. Northern Alberta previously had a donation fellowship program but this is no longer offered.

While BC and Manitoba designate donation physicians, they receive no specific training as it is expected that they are already highly supportive of donation and have strong familiarity with donation practices.

Key Message:

Canadian ODOs vary in their use of designated donation physicians, as well as the extent to which they are trained.

III.3 Professional education for external stakeholders

ODOs actively engage in education of external stakeholders who may be involved in the care of potential donors or in other facets of organ donation.

External stakeholders – International

The NHSBT in the UK and each of the American ODOs surveyed reported orientation programs specifically targeted at new nurses (Table 8). Australia and Spain, as well as most Canadian ODOs, reported no formal orientation process on the topic of donation for new nurses.

With respect to ongoing professional education, all of the international ODOs reported programs for critical care physicians and nurses, ED physicians and nurses, and critical care residents and fellows. Most international ODOs also targeted surgical OR staff. In addition to the aforementioned disciplines, the NHSBT in the UK targets neurosurgery staff and several international ODOs also trained palliative care staff (Table 6).

External stakeholders – Canada

Canadian ODOs were more variable in this regard. Education was provided to ED physicians by 7 of 10 ODOs and to ED nurses by 9 of 10 ODOs. Critical care fellows and residents, and surgical OR staff were also variably targeted by Canadian ODOs (Table 5). Respiratory therapists also received training by several Canadian ODOs (Table 5).

Additional stakeholder and public outreach

Some ODOs, such as the Philadelphia Gift of Life, reach beyond those in the direct care of potential donors to palliative medicine, ethics committees, critical care committees, and performance improvement/quality committees. TGLN in Ontario also provides tools and supports to donor families, community volunteers, transplant recipients, faith leaders, youth and non-governmental organizations, supportive private sector companies, and government organizations. Transplant Manitoba and TGLN perform outreach to high school students as part of its education program.

Key Message:

While most ODOs engage in training for those likely to be involved in the direct care of donors and potential donors, the breadth of this audience varies. While some focus almost exclusively on critical care health care providers, others expand their reach to ED staff, respiratory therapists, hospital administration, and members of the community.

Tailoring training to meet hospital needs

While national guidelines or policies are important, tailoring training at the regional or hospital level ensures applicability and relevance to the target audience. In Spain, representatives from regional authorities meet several times per year to review funding applications from hospitals and assign education priorities based on regional needs. In the UK, SN-ODs and CL-ODs are responsible for tailoring development to the region in which they practice.

Philadelphia Gift of Life develops hospital development plans, which include professional education, in conjunction with each donor hospital, consisting of a customized road map for accelerating improvement. Progress is tracked in reports and is correlated to outcomes, which inform iteration of the road map.

To maximize local applicability, training is offered in both English and French in Quebec and New Brunswick.

Key Message:

Professional education of staff external to the ODO must take into account varying levels of familiarity and previous experience, wide ranging attitudes and acceptance towards donation, and different hospital settings, to ensure training is relatable and not prescriptive.

III.4 Training modalities

The ODOs surveyed use a variety of communication modes to reach external audiences. These include on-site sessions at hospitals, face-to-face courses or workshops, online resources, and guidelines/policies/SOPs (Tables 7 and 8).

There is diversity among ODOs in terms on reliance on infrequent formal training sessions as opposed to more frequent, less formal, small group training or just-in-time training.

On-site

Training and education within the hospital may be scheduled periodically or *ad hoc*, particularly in cases where donation physicians or other expert ODO representatives are routinely present. This type of education may be delivered by ODO staff, such as donation physicians, or by local champions or experts. Close relationships between hospital staff and donation physicians, champions, or coordinators offer the opportunity for 'just-in-time' training when cases of potential donors arise.

These informal interactions supplement case reviews, grand rounds, and other formal presentations in the hospital setting. In Canada, TGLN and Transplant Quebec, in particular, reported such formal programs as important tools for external education (Table 7). In Quebec, dedicated in-house coordinators are responsible for training hospital staff, supporting organ donation committees, and collecting and analyzing data on donation practice quality indicators. CL-ODs and SN-ODs serve a similar role in the UK.

Centralized or regional training

Many ODOs hold regular, off-site training programs in the forms of symposia, workshops, or courses, either as standalone sessions or as part of a larger conference (Tables 7 and 8). In Spain, ONT organizes 30 to 40 face-to-face courses each year, which are supplemented with online education material. The NHSBT has initiated a deceased donation simulation course, which aims to reach all graduating intensive care trainees within four years. In Australia, OTA offers face-to-face workshops on effective donation conversations and is working with universities to develop a Master's course on Organ, Cells, and Tissue.

In addition to an annual Donation Symposium, OneLegacy holds quarterly Champions in Action events and small group learning events, which are attended by hospital physicians and transplant professionals.

In Canada, many ODOs host an annual symposium or similar event for external HCPs. BC Transplant, along with Canadian Blood Services, holds theirs in conjunction with the Canadian Critical Care Conference, whereas TGLN holds smaller, regional conferences for nurses every 1 to 2 years. OPEN offers education days to staff of all disciplines, either in person or via webinar.

Online

Online resources are offered by many ODOs, either to supplement face-to-face sessions, or as standalone learning modules (Tables 7 and 8). These include webinars (5 of 10 Canadian ODOs) and online manuals or resources on the ODOs own website (2 of 10 Canadian ODOs). Internationally, the NHSBT, OneLegacy, LifeCenter Northwest, and LifeSource offer web-based resources for external staff. OneLegacy's web platform, which uses Articulate (www.articulate.com), offers webinars, online courses, e-learning presentations, flowcharts and algorithms, and other reference materials.

The UK and Australia were among those that reported less reliance on web-based resources in favour of face-to-face engagement.

Key Message:

ODOs provide multiple modes of training resources and offer training regularly and frequently with the goal of providing health care practitioners with formal presentations, interactive sessions or simulations, and robust online education platforms, as well as providing 'just-in-time' training and feedback that can be applied to donor care and management.

Some ODOs hold formal review/debriefing after each case to review practices and identify areas for improvement.

III.5 Auditing and measurement

The effectiveness of education programs and their reception by external HCPs is assessed by a variety of means. In some cases, verbal feedback is accepted from attendees, while others seek written evaluations (Table 9). In Spain, attendees of ONT's courses complete a module prior to training wherein their knowledge, attitude, and feelings concerning communication with patients and families are assessed. These parameters are measured again immediately after completion of the session and again four weeks later to measure efficacy of the course at building sustained knowledge and changing attitudes towards donation.

Some ODOs, such as the NHSBT in the UK, the OTA in Australia, OneLegacy, and NEOB, test staff for competency after training (Table 10). In others, such as Philadelphia Gift of Life, professional development progress is tracked on a scorecard, but there is no formal testing.

In Canada, Newfoundland and Labrador, Quebec, and Southern Alberta test staff for competency (Table 10). BC Transplant, TGLN, and Transplant Manitoba collect feedback from participants in external education programs, but the participants are not formally evaluated. Interestingly, TGLN evaluates notification compliance at hospitals whose staff have received training to assess the effectiveness of education programs.

Key Message:

- Most ODOs solicit written evaluation of the training program by learners
- Assessment of the knowledge, competency, and attitudes of learners may ensure competency
- Measurement of systemic performance changes (referral rate, missed opportunities, attitudes) in hospitals that have received training gives a measurement of real-world impact

III.5 Keys to success

Some surveyed ODOs reported specific challenges met and approaches that have effectively countered these challenges.

The OTA in Australia initially offered webinars, which failed to engage effectively with their audience and suffered from technological problems with delivery. As a result, webinars are no longer offered in favour of face-to-face workshops. Philadelphia Gift of Life generates physician uptake by engaging with physician leadership and inviting input from physicians in the donation process, holding physicians accountable for outcomes and results, and following up immediately when there are deviations from the process. TGLN also conducts immediate follow up debriefs, in conjunction with ‘just-in-time’ learning to enhance knowledge translation.

The OTA in Australia has worked closely with professional organizations and leveraged local experts/champions to increase uptake from stakeholders. Some ODOs reported poor attendance to sessions or workshops hosted as part of larger conferences. To counter this, smaller sessions such as Grand Rounds and small group workshops have been implemented by some ODOs.

The NEOB and LifeSource emphasize ‘Connection to Purpose’ in their training, often by inviting donors or their families to speak to connect education content to a personal story. In Saskatchewan, transplant and operating room staff have recently begun taking a moment of silence in OR for the donor prior to organ retrieval, which has been positively received by staff.

Key Message:

Engagement by physicians and hospital staff in donation is critically important for increasing awareness and improving performance. ODOs reported several means of improving engagement, such as:

- Face-to-face workshops instead of webinars
- Just-in-time learning
- Seeking stakeholder input into process
- Holding HCPs accountable for performance

IV. Conclusion

This environmental scan of the practices of high performing ODOs may act as a guide to improve professional education concerning deceased organ donation in Canada.

It was conducted from 2015.08.03 to 2015.09.04 on high performing ODOs surveyed national donation organizations in the UK, Spain and Australia, as well as regional ODOs in Canada and the United States. Countries that have a national overseeing body have taken care to ensure that regional interests are represented and considered in the setting of budgets and in prioritizing training initiatives. This organizational structure requires clear separation of roles between national bodies, regional agencies, hospitals, and other stakeholders.

High performing ODOs reported having donation physicians or donation champions that were closely aligned with the ODO to act as a local resource, to assist with training, and to advocate for donation.

With respect to HCPs targeting for training, critical care physicians and nurses are almost universally targeted, whereas some provincial ODOs do not formally seek to train ED staff, surgical OR staff, and respiratory therapists. Engaging a greater variety of stakeholders may increase awareness, reduce missed opportunities, and improve quality of care of potential donors.

Hands on, face-to-face seminars or workshops were reported by many ODOs to be effective, particularly when simulation was included in the curriculum. High performing ODOs supported these programs with robust online resources, including webinars and online modules. In-hospital learning, such as Grand Rounds, just-in-time training, or debriefs after cases, were also reported to be effective.

There was variation between Canadian ODOs in their inclusion of DCD, which is an important consideration as this form of donation has been associated with the greatest quantitative impact on donation rates in many provincial and international jurisdictions.

Measurement of the degree to which a professional development program achieves its goals is important. In aggregate, ODOs reported measuring outcomes in three areas: evaluation and certification of learners, assessment of training programs by learners and participants, and measurement of changes in HCP and hospital performance after education.

There is no formal certification process or objective standard evaluation of education competencies in Canada. Learner assessment varied between ODOs. The most extensive assessment measured competency before and after training and offered certification to those that met the learning objectives. Formal written evaluation of professional development programs by participants was a widely used tool for obtaining feedback. Measurement at a system level, whereby changes in performance of hospitals over time are analyzed, may also be useful in determining the impact of training initiatives. Such measurement is more robust when clinical practices and training programs are standardized and consistently implemented.

1. Topics covered in education to staff internal (I) and external (E) to ODOs - Canada

Topic	ODO Region									
	BC	AB North	AB South	SK	MB	ON	QC	NB	NS	NL
OTDT System Overview	I, E		I, E	I	I, E	I, E	I, E	I, E	I	I, E
Clinical Triggers/ Identifying potential organ donors	I, E	I	I, E	I	I, E	I, E	I, E	I, E	I	I, E
Donor Management	I, E	I	I, E	I	I, E	I, E	I, E	I, E	I	I, E
Process for referring potential donors	I, E	I	I, E	I	I, E	I, E	I, E	I, E	I	I, E
Inclusion and Exclusion Criteria ¹	I, E (inclusion only)	I	I, E	I	I, E (inclusion only)	I, E	I, E	I, E	I	I, E (inclusion only)
How to Conduct NDD	I, E	I	I, E	I	I, E	I, E	I, E	I, E	I	I, E
How to Conduct DCD	I, E	I	I	I	I, E	I, E	I, E		I	I
Pediatric NDD	I	I	I, E	I	I, E	I, E	I, E	I, E	I	I, E
Pediatric DCD				I		I, E	I		I	
Ancillary Tests for NDD	I, E	I	I, E	I	I, E	I, E	I, E	I, E	I	I, E
Best Practice in Consent Discussions	I, E		I, E	I	I, E	I, E	I, E	I, E	I	I
Legal and ethical considerations in deceased OD		I	I, E	I	I, E	I, E	I, E	I, E	I	I, E
Surgical DCD process	I				I, E	I, E	I	E		
Hospital DP role						I				
High risk donors				I						
Donor Coord role in transportation				E						

¹ the vast majority of interviewees reported a focus on teaching inclusion criteria.

2. Topics covered in education to staff internal (I) and external to ODOs – International

Topic	ODO Region							
	UK	Australia	Spain	Seattle (Life Center Northwest)	Los Angeles (OneLegacy)	Minnesota (LifeSource)	Philadelphia (Gift of Life)	New England (Organ Bank)
OTDT System Overview	I, E	I, E	I, E	I, E	I, E	I, E	I, E	I, E
Clinical Triggers/ Identifying potential organ donors	I, E	I, E	I, E	I, E	I, E	I, E	I, E	I, E
Donor Management	I, E	I, E	I, E	I, E	I, E	I, E	I, E	I, E
Process for referring potential donors	I, E	I, E	I, E	I, E	I, E	I, E	I, E	I, E
Inclusion and Exclusion Criteria ¹	I, E	I, E	I, E	I, E	I, E	I, E	I, E	I, E
How to Conduct NDD	I, E	I	I	I, E	I, E	I, E	I, E	I, E
How to Conduct DCD	I, E	I, E	I	I, E	I, E	I, E	I, E	I, E
Pediatric NDD		I		I, E	I, E	I, E	I, E	I, E
Pediatric DCD		I		I, E	I, E	I, E	I, E	I, E
Ancillary Tests for NDD	I, E	I, E	E	I	I, E	I, E	I, E	I, E
Best Practice in Consent Discussions	I, E	I, E	I, E	I, E	I, E	I, E	I, E	I, E
Legal and ethical considerations in deceased OD	I, E	I, E	I, E	I, E	I, E	I	I	I, E
Surgical DCD process	I	I, E		I, E	I, E	I, E	I, E	I, E

¹ the vast majority of interviewees reported a focus on teaching inclusion criteria.

3. Sources of education content - Canada

Source	ODO Region									
	BC	AB North	AB South	SK	MB	ON	QC	NB	NS	NL
Publications/ reviews	√	√		√	√	√	√		√	√
material from professional associations					√	√	√		√	√
Case Reviews	√	√		√	√	√	√	√	√	√
Canadian Blood Services Leading Practices	√			√	√	√	√	√	√	√
SOPs/forms/ checklists				√						
Internal tools (e.g. resource binder, posters)				√	√					

4. Sources of education content - International

Source	ODO Region							
	UK	Australia	Spain	Seattle (Life Center Northwest)	Los Angeles (OneLegacy)	Minnesota (LifeSource)	Philadelphia (Gift of Life)	New England (Organ Bank)
Publications/ reviews		√	√	√	√	√	√	√
Material from professional associations	√	√	√	√	√	√	√	
Case reviews/ studies	√	√	√	√	√	√	√	√
Regulatory requirement						√		
Internal/ODO guidelines/best practice documents	√		√		√			√

5. Discipline of staff receiving education – Canada

Discipline	ODO Region									
	BC	AB North	AB South	SK	MB	ON	QC	NB	NS	NL
Donation Physicians	√				√	√				
Critical Care Physicians	√	√	√	√	√	√	√	√		√ (ICU)
Critical Care Nurses	√	√	√	√	√	√	√	√	√	√
ED Physicians	√			√	√	√	√	√		√
ED Nurses	√		√	√	√	√	√	√	√	√
Critical Care Residents	√	√	√	√	√	√	√		√	√
Critical Care Fellows	√	√	√	√	√	√	√			
Donor Coordinators	√	√	√	√	√	√	√	√	√	√
Surgical OR Staff	√	√	√		√	√	√			√
Other key disciplines	RT, SW				RT Spir Care		RT			RT

*these disciplines were added as interviewees indicated they are part of their core team.

SK: mostly upon request

Blank cells means not applicable or nil reported

6. Discipline of staff receiving education - International

Discipline	ODO Region							
	UK	Australia	Spain	Seattle (Life Center Northwest)	Los Angeles (OneLegacy)	Minnesota (LifeSource)	Philadelphia (Gift of Life)	New England (Organ Bank)
Donation Physicians	√	√	√		√	√	√	√
Critical Care Physicians	√	√	√	√	√	√	√	√
Critical Care Nurses	√	√	√	√	√	√	√	√
ED Physicians	√	√	√	√	√	√	√	√
ED Nurses	√	√	√	√	√	√	√	√
Critical Care Residents	√	√	√	√	√	√	√	√
Critical Care Fellows	√	√	√	√	√	√	√	√
Donor Coordinators	√	√	√		√	√	√	
Surgical OR Staff	√	√	√		√		√	√
Other key disciplines	Neurosurg				Spirit Care, Pall Care	Surgical resource coord	Pall Care, Numerous committees	SW Pastoral Care

7. Mode of education for staff external (E) and internal (I) to ODOs - Canada

Mode	ODO Region									
	BC	AB North	AB South	SK	MB	ON	QC	NB	NS	NL
Orientation	E	I	I, E	I	I	I, E	I, E	E		I, E
Formal Presentations	I, E	I, E	I, E	I, E	I, E	I, E	I, E	I, E	I, E	I, E
Case Reviews	I, E	I	I, E	I	I, E	I, E (case scenarios)	I, E	I, E	I	I, E
Self-directed/online modules	I	I		I	I	I	E	I, E	E	I
Webinars		I	I	I	I					E
Grand Rounds	E				I, E	I (via teleconf), E	E			E
Preceptorship	I	E			I		I			
Quality Processes (M&M, critical incident reviews)	I		I	I			I		I	I
External Websites		I	I					I		I
Direct Staff to Specific Journal Articles			I							
OD 1-year Fellowship		E								
On-line manual/ODO's own website						E			E	
Just-in-Time						E	E	E		

8. Mode of education for staff external (E) and internal (I) to ODOs - International

Mode	ODO Region							
	UK	Australia	Spain	Seattle (LCNW)	Los Angeles (OneLegacy)	Minnesota (Life Source)	Philadelphia (GOL)	New England (NEOB)
Orientation	E	I	I	I, E	I, E	I, E	I, E	I, E
Formal Presentations	I, E	I, E	I, E	I, E	I, E	I, E	I, E	I, E
Case Reviews	I, E			I, E	I, E	I, E	I, E	I, E
Self-directed/online modules	I	I, E (delivered regionally)	I	E	I	E	I, (in dev'nt for E)	In dev'nt for I, in place for E
Webinars				I	I, E	E	I, (in dev'nt for E)	I
Grand Rounds	E			E	E		E	E
Preceptorship				E		I	E	
Quality Processes (M&M, critical incident reviews)			I	I	I	I	I	I
External Websites				I	I	I	I	I
Symposium					I, E			
On-line manual/ODO's own website								
Real-Time						E		E
Practical Demonstration	I, E							
Face-to-face workshops		I, E						

9. Learner assessment of programs

	ODO Region									
	BC	AB North	AB-South	SK	MB	ON	QC	NB	NS	NL
Informal/ verbal		NR							NR	√
Written	√	NR		√	√	√	√	√	NR	√

10. Assessment and certification of learners

	ODO Region									
	BC	AB North	AB-South	SK	MB	ON	QC	NB	NS	NL
Post-test/quiz		NR				√ (internal)		√	NR	
Pass/fail Certification		NR	√ (internal)				√ (internal)		NR	√ (internal)

11. Frequency of formal education to external stakeholders – Canada (over the last 5 years)

	ODO Region									
	BC	AB North	AB South	SK	MB	ON	QC	NB	NS	NL
Frequently (1x/month)						√	√			
Often (every 2-6 months)		√	√						√	√
Once in a while (once a year)	√				√			√		
As requested				√						