

Living and Deceased Kidney Donation in Canada

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Kidney transplantation is the optimal treatment for end stage kidney disease. There are two types of kidney donors—living or deceased—and their proportions vary in different countries. This summary focuses on the living and deceased donation of all organs in Canada, which uses a voluntary opt-in system, where an individual who is eligible to become an organ donor may choose to opt-in to a national or provincial registry.

The total number of kidney transplants performed in Canada in 2019, the last year with data available, was 1483 (1) (including 53 kidney-pancreas transplants but excluding Quebec). The number of total living donors in Canada increased only modestly in the last decade, from 557 living donor transplants in 2010 to 614 in 2019 (2). The living donation rate declined slightly during this time (3). In contrast, the number of deceased donors nearly doubled during the same time, from 466 donors in 2010 to 820 donors in 2019, with a similar trend also being observed for the number of kidney transplants from deceased donors (1, 2) (Figure 1). The increase in deceased donors has been driven by the higher prevalence of donation after circulatory death (DCD) donors, which increased from <10% of all deceased donors in 2010 to 29% of all deceased donors in 2019 (2). DCD was launched in 2006 and was accompanied by strong advocacy efforts and the implementation of a legal framework, leading to its success (2, 4, 5, 6) (Figure 2).

Efforts directed at increasing awareness and living kidney donation are warranted globally.

There is an interesting sex bias when it comes to the composition of living compared to deceased donors in Canada. Excluding Quebec (data unavailable), 62% of living donors in Canada were female, whereas a similar proportion of deceased donors (61%) were male. Furthermore, of the living organ donors, 57% were unrelated to the transplant recipient (2). Interestingly, although living donation has been stagnant since 2010 (3), at 16.3 donors per million population, Canada has one of the higher living donation rates compared to most other countries with available data (7). Overall, Canada's deceased donor transplantation has increased markedly, mostly due to increased DCD donors. Efforts directed at increasing awareness and living kidney donation are warranted globally. ■

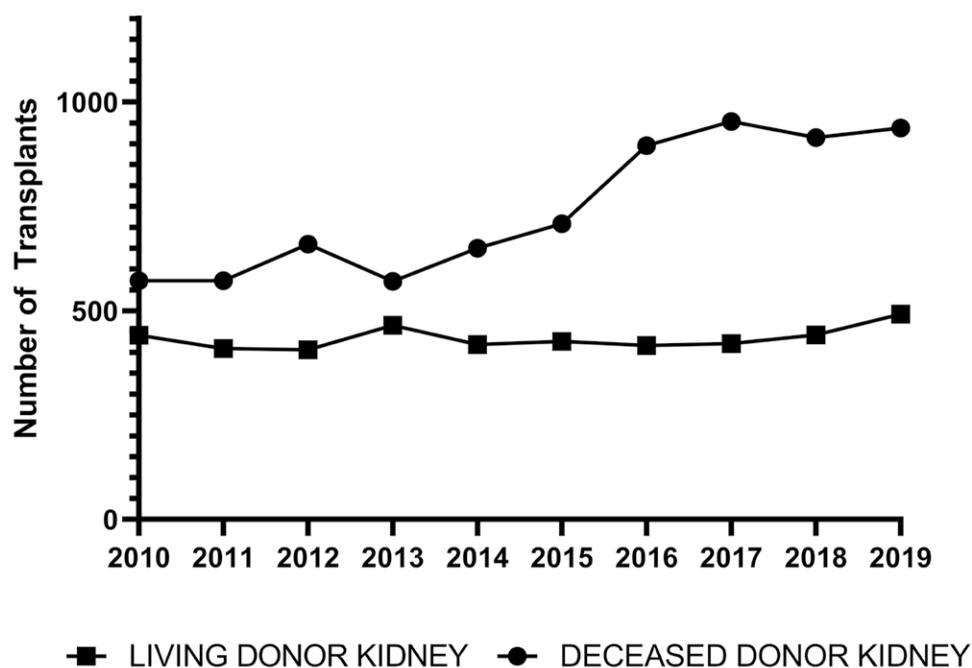
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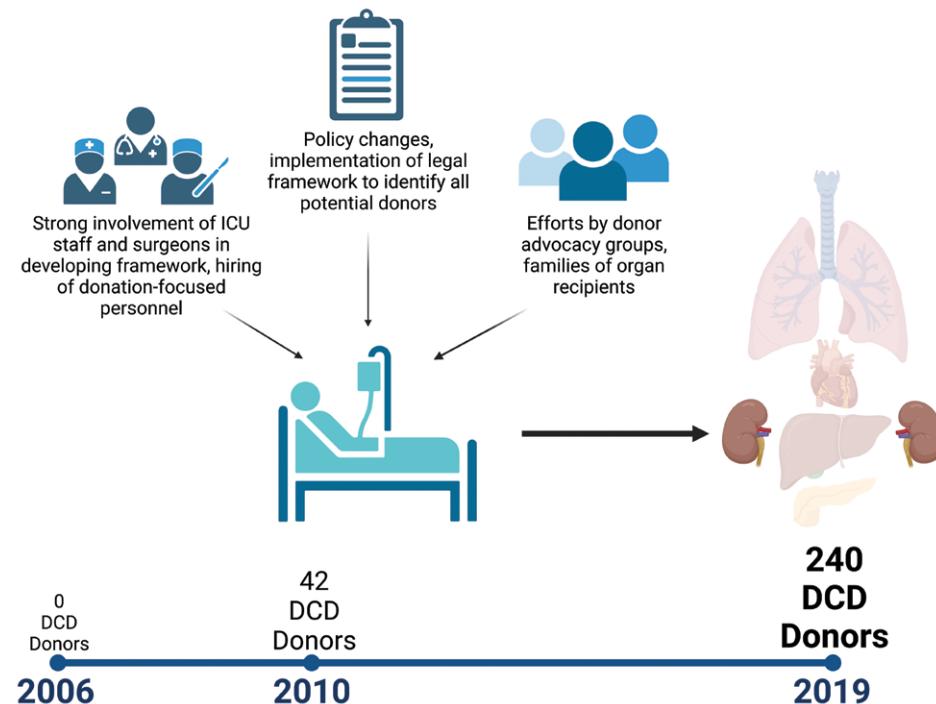
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Figure 1. Number of kidney transplants performed in Canada



The number of kidney transplants performed in Canada from living donor (squares) and deceased donor (circles) kidneys, between 2010 and 2019, excluding Quebec (data unavailable). Data obtained from Canadian Institute of Health Information (1).

Figure 2. Reasons for the increased number of DCD donors in Canada



Infographic outlining the reasons for the increased number of DCD donors in Canada as a result of explicit measures implemented in 2006. Created with BioRender.com.