

Improving the Rate of Tissue Donor Referral Through a New Level of Cooperation Between Héma-Québec and the Québec Coroner's Office to Better Identify Potential Tissue Donors

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Background: The 24-hour period following death is crucial to the recovery of high-quality human tissues for transplantation. In Québec (Canada), hospitals are compelled by law to refer potential tissue donors to Héma-Québec – the province's blood and human tissue bank. However, a report showed that < 5% of deaths by suicide in 2017 had been referred to the tissue bank, while ~ 40% of in-hospital deaths in the province are expected to be eligible for tissue donation. Therefore, new initiatives were needed to improve the rate of donor referral to Héma-Québec.

Hypothesis: This study aimed to describe the effectiveness of a new collaboration between Héma-Québec and the Québec coroner's office, which might improve the identification and referral of potential tissue donors.

Methods: Per a new collaborative agreement, a first liaison officer (working Monday through Friday) was hired on February 24, 2020 to work on-site monitoring the coroner's office database for potential donors; remote work was instituted in March 2020. A second officer (working evenings, Sunday through Thursday) was hired on April 11, 2021. A record was kept of all files accessed in the coroner's office database, and all deceased individuals under the age of 75 were evaluated in real time if reported during working hours for their potential as tissue donors. The officer checked existing donor registries, contacted the coroner and the family and referred potential donors to the tissue bank. The number of potential tissue donors whose death was reported to the coroner's office for the year 2021-2022 (from April 1, 2021 to March 31, 2022) was compared to the same period for the year 2019-2020. Data for the year 2020-2021 was available but was not included in the analysis, since only one liaison officer was in place and COVID-19 restrictions slowed the activities of the tissue bank by ~ 30%.

Results: In 2019-2020, 8,166 deaths were reported to the Coroner's office, of which 460 (5.6%) were evaluated by a liaison officer and 156 (1.9%) subsequently donated ≥ 1 tissue (Table 1). These 156 individuals accounted for 16.2% of all tissue bank donors. Overall, 37.5% of individuals who donated multiple tissues had been referred from the Coroner's office (Table 2). In 2021-2022, 9,043 deaths were reported to the Coroner's office, of which 5,670 (62.7%) were evaluated by a liaison officer and 223 (2.5%) subsequently donated ≥ 1 tissue (Table 1). These 223 individuals accounted for 25.9% of all tissue bank donors. Overall, 53.8% of individuals who donated multiple tissues had been referred from the Coroner's office (Table 2).

Conclusions: This collaboration with the coroner's office has improved the identification and referral of potential tissue donors to the tissue bank. Specifically, the proportion of deaths leading to tissue donation has increased by 31.6% (i.e., 1.9% to 2.5%) from 2019-2020 to 2021-2022. The proportion of

donors of multiple tissues through Héma-Québec from the coroner's office has increased by 43.5 % (i.e., 37.5% to 53.8%). This cooperation supported the activities of the tissue bank throughout the pandemic.



Table 1. Deaths reported to the Québec coroner's office

	2019-2020	2021-2022
	N=8,166	N=9,043
Evaluated by a liaison officer, n (%)	460 (5.6)	5,670 (62.7)
Referred to the tissue bank by the liaison officer, n (%)	8 (0.1)	185 (2.0)
Donors, n (%)	156 (1.9)	223 (2.5)



Table 2. Deceased individuals who donated tissue through Héma-Québec

	2019-2020	2021-2022
Type of tissue		
<i>Any, N</i>	962	861
From coroner's office, n (%)	156 (16.2)	223 (25.8)
<i>Eye (only), N</i>	666	627
From coroner's office, n (%)	45 (6.8)	97 (15.5)
<i>Multiple, N</i>	296	234
From coroner's office, n (%)	111 (37.5)	126 (53.8)
Donor age (years), mean \pm SD		
From coroner's office	61.9 \pm 16,2	62.7 \pm 15.0
	47.9 \pm 18,2	50.0 \pm 18.9