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The Organ Donation Breakthrough Collaborative: has it made a difference?

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Abstract

BACKGROUND: The Organ Donation Breakthrough Collaborative (ODBC) was established in 2003 to increase the number of transplantable organs in the United States. However, recent publications have suggested that the ODBC has not impacted donation conversion rates at local organ procurement organizations (OPOs). We sought to determine the impact, if any, of our becoming part of the ODBC on organ donation rates in our OPO or in our institution (Carolinas Medical Center [CMC]), particularly among minority donors.

METHODS: This is a retrospective review of data entered concurrently into a patient referral database maintained by our local OPO. Donation approach and consent rates were calculated. They were then analyzed by race and institution, and trends were analyzed over the study period of 2002 to 2010. Statistical differences between the various patient groups were determined by the chi-square test or the Fisher exact test. Statistical differences over time were determined by the Cochran-Armitage trend test.

RESULTS: From 2002 to 2010, 10,855 patients were screened by our OPO for potential organ donation. The overall approach rate was 13.4%, and the consent rate was 57.6%. An increase in approach and consent rates was noted beginning in 2004, but this increase was not sustained. Consent rates in general were higher for white patients than for black and Hispanic patients. Consent rates for CMC did increase significantly ($P = .02$), but they did not increase for the non-CMC hospitals. When analyzed by race, no significant changes were noted in consent rates over time. When analyzed by race and institution, the only statistically significant increase in consent rates occurred for white patients at CMC.

CONCLUSIONS: Since joining the ODBC, we have noted an increase in consent rates at a single institution (CMC), but no other significant changes. Greater emphasis should be placed on methods to increase and sustain consent rates for all racial groups in general, with a special emphasis on increasing consent rates in minority patients.

The currently existing supply of transplantable organs in the United States is woefully inadequate to meet the needs of patients awaiting organ transplantation. Currently, in the United States there are 110,586 patients on the transplant waiting list, and each day 18 patients on that list die awaiting an organ that never arrives.[2] Several large-scale national initiatives have been developed to address this pressing need, with limited success. The Organ Donation Breakthrough Collaborative (ODBC) is one such initiative, funded by the Division of Transplantation in the Health Resources and Services Administration of the US Department of Health and Human Services and developed in

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collaboration with the Institute for Healthcare Improvement. It was launched in September 2003 with the expressed intent of increasing the number of organs available for transplantation in the United States. Our local Organ Procurement Organization (OPO), LifeShare, and our own institution, Carolinas Medical Center (CMC), joined the ODBC in 2004. As a result, significant resources, both financial and human, were invested with the hope of improving donation rates and organs transplanted within our region. Specific changes within our OPO and our hospital that were brought about through participation in the ODBC include the following:

- The establishment of clinical triggers, which are simple physiologic and anatomic criteria that allow easier and more timely identification of potential organ donors
- Dedicated support coordinators ("24/7") for families of potential organ donors
- Dedicated critical care support (personnel, protocols) for potential organ donors and those who have consented to be organ donors
- Institution of a "death by neurologic criteria" guideline designed to achieve a more timely and more standardized declaration of brain death
- Institution of extensive educational programs for physicians, nurses, and other hospital personnel
- New policies and protocols for donation after cardiac death
- Establishment of several oversight committees to monitor compliance with, and success of, instituted changes

The increased focus on organ donation improvement has indeed improved conversion rates (number of organ donors per number of patients eligible to become organ donors) and organs transplanted per donor within our institution, as well as within our OPO, and several other institutions and OPOs have documented similar increases in donation activity coincident with their participation in the ODBC. However, some recent publications have suggested that the ODBC has not impacted donation conversion rates at their local OPOs. We therefore became interested in determining the overall impact of our participation in the ODBC as well as what specific phase or phases of the consent process (identification of potential donors, screening of potential donors, approaching families of potential donors, and obtaining actual consent for donation) had been impacted, particularly among minority donors. Therefore, this study examines donation consent rates for our OPO by institution and by race between 2002 and 2010. Our hypothesis was that consent rates for minority patients had increased in our own institution, as well as within the entire OPO, as a result of participating in the ODBC.

Methods

LifeShare of the Carolinas is a not-for-profit OPO designated by the federal government to serve 40 hospitals in a 22-county area of southwestern North Carolina. All potential organ donors referred to LifeShare are entered concurrently into Transplant Connect, a prospective database that captures basic demographic information as well as the outcome of the donor assessment process and the donation outcome. Our study is a retrospective review of Transplant Connect data for the years 2002 through 2010. In addition to basic demographic information, we also recorded whether the patient's family was approached for consent to organ donation and whether consent was obtained. Approach rates and consent rates were then calculated for each year of the study (2002 to 2010) for the entire OPO, CMC, and all other institutions in our OPO in aggregate (non-CMC hospitals). The following definitions were used to analyze our data:

- Approach rate: number of patients approached for donation per number of patients screened for donation
- Consent rate: number of patients who consented for donation per number of patients approached for donation

The rationale for performing a separate analysis of outcomes at CMC stems from the fact that this institution is the largest hospital served by the OPO, it is the only transplant center in the region, and it is located in the most ethnically and racially diverse city within the OPO service area. CMC is the flagship facility of the Carolinas Healthcare System with an 874-bed hospital in Charlotte that includes a level I trauma center and numerous specialty services, including organ transplantation. Thus, we felt that any increases in organ donation rates, particularly among minority patients, would more likely occur at this institution and might be obscured by less substantial increases (or even decreases) experienced by non-CMC hospitals. Finally, approach rates and consent rates were analyzed by race (white, black, and Hispanic) for the entire OPO, for CMC only, and for the non-CMC institutions during each year of the study.

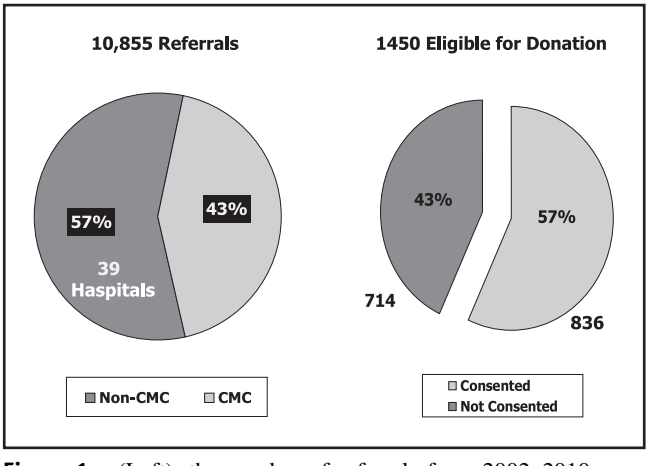

Figure 1 (Left), the number of referrals from 2002–2010 analyzed by institution. (Right), the overall number of referrals eligible for donation and the OPO-wide consent rate.