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## DONATION OF ORGANS FOR TRANSPLANTS IN BRAZIL: WHAT IS MISSING? WHAT CAN BE DONE?

Doação de órgãos para transplantes no Brasil: o que está faltando? O que pode ser feito?

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The fundamental problem in the modern practice of organ transplantation is the striking disparity between the number of patients potentially treatable with the donation of viable grafts and the same impressive organ shortage, particularly in our country. What is missing in order to solve this problem is a way to solve it effectively? We must make the whole transplant process effective, bringing hope to many sick people waiting possible curative therapy, the replacement of an organ for terminal illnesses.

The transplant is an effective therapeutic indication in irreversible kidney, heart, liver, lungs and pancreas diseases. The patients in terminal states of renal function and endocrine pancreas have therapeutic alternative to transplantation, dialysis and administration of exogenous insulin, respectively. In terminal states of the heart, liver or lung have the sole option to replace the diseased organ. As a cause of bankruptcy are very common diseases in our population such as diabetes, hypertension, alcoholic liver disease and viral hepatitis<sup>1,3,5</sup>.

Given this scenario it is observed in Brazil, on one hand, the large number of patients waiting for a transplant, and other, donations and recovery of organs below the needs of large waiting list. Additionally, it is important to emphasize that the effectiveness of organ transplantation is directly related to the donation process and in our country, in cases of liver transplantation, almost totally dependent on the deceased organs donor. It is noteworthy that by the end of third quarter of 2010, 1059 of liver transplants performed in Brazil, only 7% were living donors<sup>4</sup>. It appears, therefore, crucial to deceased donor liver transplantation in adults as for children, by the shortage of deceased donors with low age, live donors appears as the best alternative option<sup>3</sup>.

In Brazil, two types of solid organ transplants were better developed: kidney and liver. After a difficult initial phase - 60s and 80s - with the establishment and standardization of surgical techniques, new immunosuppressive drugs, clinical management of

learning and adaptation of logistics throughout the transplant process, in 90s the rate of growth of these two modes did well. Others was also evolved as the heart, pancreas, kidney, pancreas, lungs and intestine<sup>3,4</sup>.

Brazil, with its continental size and presenting external causes as the main predictor of mortality in young adults<sup>2</sup> during the 2000s showed no increase in the number of transplants, particularly kidney (18.2 per million population - pmp - in 2005 to 24.4 pmp in 2010) and liver (5.2 pmp in 2005 to 7.4 pmp in 2010). Currently, with the country population of 190 million people and possessing high potential transplant recipients, more than half the states do not do transplants in general, particularly the liver. They are states of the Midwest, Northern and most of the Northeast<sup>4</sup>.

Interestingly, transplant groups were installed in our country following the same route of colonization, from east to west-central. Nevertheless, the states of the federation who do, their implementation is not distributed equally and there is great heterogeneity of numbers of procedures per million people. This is due to the absence of national policy with regard to both the donation of organs as well as encouraging the formation of transplantation teams, which most often are formed by individual effort of persons.

The state of Sao Paulo holds more than half of liver transplants done in the country (17.8 pmp), while Brazil as a whole, reached the 2010 mark of 7.4 pmp, ranging from 2.4 (Bahia ) to 17.8 pmp (Sao Paulo); additionally, various federal states do not perform the procedure. The state of São Paulo reached levels very similar to the vast majority of U.S. states (U.S. is 17.9 pmp). Spain, with well-organized political organ donation and transplantation, achieved more than 35 liver transplants pmp, per year, above the national brazilian average<sup>1,3,4</sup>.

In a country the size of Brazil, this small increase in the number is due to limiting factors, such as donation not approved by family and bad conditions of maintenance of the donor in hospital. When analyzing separately the state of Sao Paulo, the number of potential donors is 63 pmp, while the number of effective donors falls to 21.3 pmp. The numbers, though far below those of Spain (34 to 37pmp) approach to countries of Europe and United States. However, in Brazil as a whole, the number of potential donors is 36.4 pmp, while the actual falls to 10 pmp, a reality far less exciting than the distance of the first world countries. The observed differences in the number of transplants - which are nothing more than a reflection of organ donation - should be less negative to the families (20-25%) than to other factors, directly or indirectly related to structural problems of hospitals that have serious difficulties in maintaining viable donors to have their organs transplanted<sup>3,4</sup>.

There is necessity of a conjunction of factors (Figure 1) so that the actual number of donations increases, using good quality organs. Among them is necessary the well functioning committees in-hospital to donate organs and tissues for transplantation (CIHDOTT) installed in all hospitals with 80 beds or more in compliance with Resolution 1752, which refers to the September 23, 2005, published in Official Union Diary No. 186 - Section I, 27/09/2005. Additionally, it is imperative to have improved hospital facilities for the maintenance of donor hospitals in midsize cities. Also, there must be: a) increase of specialized teams and decentralized demand for organs; b) training of local professionals to perform abstractions; c) encouraging the formation of the transplantation teams in the regions of the country not currently picking-up and transplanting; d) decentralization with the creation of regional CNCDOs in populous states in attendance to Resolution 2660 October 21, 2009 of the National Transplant from the Ministry of Health.

Thus, there is the need of effective involvement of all institutions that form the pillars of the entire transplant process: public authorities, hospitals, health professionals and society. It is believed that with this conditions in mind, the goal to shortens the waiting lists of transplant, can already be reached in 2011.

Public Power	Policies for training and transplantation teams to capture multiple organs throughout the country. Financing of human resources services and structure.  Promote agile operation of CNCDOs *.  Regionalization CNCDOs according to state population.  Incentive/commission effective monitoring of in-hospital organ and tissue donation for transplantation ( CIHDOTT).
Hospitals/ professionals health	Training of clinical, surgical and transplant teams to capture multiple organs. Active search for donors. Best host of relatives. Expedite testing of the donor. Attend to the good care of the donor, increasing the number of effective donors. Optimizing the diagnosis of brain death. Promote training of surgical teams from various cities in giving administrative regions
Society	Solidarity, in the form of donation. Formation of regional leaders for donation campaigns. Improve understanding of the whole process of organ transplantation.

<sup>\*</sup> Notification Center, Organ Procurement and Distribution

FIGURE 1 - Actions required from public authorities, hospitals, health professionals and society for the optimization of organ donation and transplantation in general

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