

## Summary: The Quality Improvement Program in Organ Donation of the Tuscany Region

G. Bozzi, R. Matesanz, A. Saviozzi, and P.L. RossiFerrini

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### ABSTRACT

Since October 2002, after a pilot period, a quality improvement program in organ donation has been underway in Tuscany. This program is based on a database elaborated by the Transplant Coordination Office of the Pisa University, according to the Spanish program of the National Transplant Organization. All encephalic deaths occurring in intensive care units beds during mechanical ventilation are registered in the database. Encephalic deaths were evaluated by local transplant coordinators and anesthesiologists after review of the clinical records. The data are sent every month to the Central Unit located in the Santa Chiara Hospital of Pisa. Every 3 and 12 months, we calculate the indices to evaluate organ donation activity in every hospital. The preliminary results show that: (1) the program is a useful tool to evaluate the organ donation process; (2) the experience is limited, but has shown the potential of the program to increase organ donation activity in Tuscany.

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**O**RGAN AND TISSUE transplants are becoming routine therapies in most countries offering the only alternative for many patients with end-stage organ diseases. To reduce the ever-increasing gap between demand and supply, new, specific approaches are being developed to reduce the losses along the organ donation process, particularly detection of potential donors.<sup>1</sup> A specific quality improvement program was created to quantitate the potential for organ donation in every hospital and intensive care unit (ICU).<sup>2</sup> This program allows us to evaluate the whole process of organ donation to detect eventual losses.

### METHODS

After a pilot period, the "Quality Improvement Program in Organ Donation" has been running in the 16 hospitals of Tuscany since October 2002. This program uses a database written by the Transplant Coordination Office of the Pisa University, according to the Spanish program of the National Transplant Organization (ONT). All encephalic deaths occurring in ICU beds with mechanical ventilation are registered in the database, together with general data about the hospitals and intensive care units. Encephalic deaths are evaluated by local transplant coordinators and anesthesiologists after review of clinical records. The data are sent every month to the Central Unit located in the Santa Chiara Hospital of Pisa. Every 3 and 12 months, we calculate the indices to evaluate organ donation activity in every hospital and compare at the wider experiences like the Spanish one.<sup>3</sup>

### RESULTS

The data obtained during the first 6 months (October 2002 to April 2003) show a great variability from hospital to hospital with respect to the detection of encephalic deaths and to the percentages that become donors, even among hospitals with similar characteristics and structures. More specifically among the four hospitals with neurosurgery units, denoted by the letters "A," "B," "C," "D," we found that hospitals A and C showed a good levels of potential donor detection, with 16.3% and 27.7% percentages of encephalic deaths/total deaths in ICU, whereas the Spanish standards for the hospitals with the same characteristics is 15.4%. The efficiency of the donation process is acceptable in hospital A with a ratio of real donors/encephalic deaths of 36.7% compared with Spanish standard of 49%, and low for the hospital C namely 16.7% mainly due to a high family refusal rate.

For hospitals B and D there were problems of detection of encephalic deaths in ICU, with 9.9% and 8.3% percentages of encephalic deaths/total deaths in ICU compared with the Spanish standard of 15.4%. With respect to the results of the following steps of organ donation both

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From the Coordinamento della Donazione Organi e Tessuti, Azienda Ospedaliera Pisana (G.B., A.S.) and Regione Toscana (R.M., P.L.R.), Pisa, Italy.

Address reprint requests to G. Bozzi, Coordinamento della Donazione Organi e Tessuti, Azienda Ospedaliera Pisana, Via Roma 57, 56100 Pisa, Italy. E-mail: g.bozzi@ao-pisa.toscana.it

hospitals seem acceptable, although there is a potential for improvement, namely 36.4% of real donors/encephalic deaths for hospital B and 50% for the other.

The other 12 Tuscany hospitals without a neurosurgery department presentense there is a good rate of detection encephalic deaths/deaths in ICU namely 8.1% versus 7.5% in Spain. The efficiency of the process in terms of real donors/encephalic deaths is 47.9% versus 37.8% in Spain. The evaluation of these hospitals was performed as a whole due to the brevity of the analysis period, and therefore the small number of potential donors analysed within the program.

#### CONCLUSIONS

The preliminary results of the Tuscany Quality Improvement Program show that the program is a useful tool to

evaluate the process of organ donation and identify the weakest points of every hospital in order to design strategies for improvement. The experience is still limited, even though it has just allowed us to observe a potential of the program to increase organ donation activity in Tuscany.

#### REFERENCES

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