

The 2008 Annual Report of the OPTN and SRTR

Innovations in the Assessment of Transplant Center Performance: Implications for Quality Improvement

Overview

- The transplant community has been a pioneer in periodic review of clinical outcomes to ensure the optimal use of limited donor organs.
- Through data collected from the OPTN and analyzed by the SRTR, transplantation professionals have intermittent access to specific, accurate, and clinically relevant data that provides information to improve transplantation.
- Statistical process control techniques including cumulative sum charts (CUSUM) are designed to provide continuous, real-time assessment of clinical outcomes.
- CUSUMs can be constructed that provide risk-adjusted program-specific data to inform quality improvement programs.
- When retrospectively compared to currently available data reporting, the CUSUM method was found to detect clinically significant changes in center performance more rapidly, which has the potential to inform center leadership and enhance quality improvement efforts.

The table on the following page shows a comparison of time to flagging for two CUSUM methodologies to the SRTR's Program-Specific Reports. It is included in Chapter VII of the report.

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The data and analyses reported in the 2008 Annual Report of the U.S. Organ Procurement and Transplantation Network and the Scientific Registry of Transplant Recipients have been supplied by the United Network for Organ Sharing and the Arbor Research Collaborative for Health under contract with the Department of Health and Human Services. The authors alone are responsible for reporting and interpreting these data; the views expressed herein are those of the authors and not necessarily those of the U.S. Government.

This Annual Report is a publication of the Department of Health and Human Services. It was developed by contract for the Health Resources and Services Administration, Healthcare Systems Bureau, Division of Transplantation. Suggested Citation: 2008 OPTN/SRTR Annual Report 1998-2007. HHS/HRSA/HSB/DOT; UNOS; Arbor Research Collaborative for Health. This is a U.S. government-sponsored work. There are no restrictions on its use.

The Number of Facilities Flagged and Average Time to Flagging in the Program-Specific Reports Compared to Methods Based on One-Sided and O-E CUSUMS for One-Year Survival in 100 Kidney Transplant Programs

Facility size		# and average time for PSR flagging		# and average time for one-sided CUSUM		# and average time for O-E CUSUM	
<i>transplants/yr</i>	<i># facilities</i>	<i>#</i>	<i>time*</i>	<i>#</i>	<i>time*</i>	<i>#</i>	<i>time*</i>
8-20	3	0	NA	1	1.00	1	1.00
20-50	27	5	3.20	8	1.51	8	1.52
50-100	37	2	3.00	5	1.92	5	1.91
100-140	17	0	NA	3	0.75	3	0.75
140-180	9	1	3.00	3	1.03	3	1.03
180-220	7	1	3.00	1	1.22	1	1.22

Dataset included 3.5 years of information

* in years