# Relative performance index methodology for solid organ transplant programs

Cigna LifeSOURCE Transplant Network



### Introduction

The Cigna LifeSOURCE Transplant Network® is responsible for maintaining a high-performing network of transplant programs that meet or exceed standards based on the following factors, among others: transplant-specific experience, performance outcomes, transplant facilities and transplant team personnel. Information is collected through an annual quality and performance review process and is analyzed and approved by the Cigna LifeSOURCE Transplant Network Performance Review Committee (NPRC). Based on this review, the NPRC determines the participation status of each transplant program in the Cigna LifeSOURCE Transplant Network.

The NPRC uses a variety of sources to set guidelines for program volumes and performance outcomes. Industry standards and norms are used as a basis for the Cigna LifeSOURCE network program inclusion guidelines and are identified through professional experience, transplant-related publications, and information posted on websites authored by the United Network for Organ Sharing (UNOS), Scientific Registry of Transplant Recipients (SRTR), Organ Procurement and Transplantation Network (OPTN) and Centers for Medicare & Medicaid Services (CMS), among others. The Cigna LifeSOURCE network program inclusion guidelines exceed the industry standards or norms.

For solid organ programs, yearly outcome and volume data from the July SRTR PSRs and OPTN websites are analyzed. The SRTR provides ongoing evaluation of the scientific and clinical status of solid organ transplantation

for kidney, heart, liver, lung and intestine transplants. The federally mandated and funded SRTR publishes data on all solid organ transplants and donations in the United States.

# **Statistical Analysis Components**

The Cigna LifeSOURCE Transplant NPRC utilizes the July SRTR Program Specific Reports (PSRs) each year to assess the performance outcomes of adult transplant programs based on the following metrics: the waitlist transplant rate (getting a deceased donor transplant faster), the pretransplant mortality rate (adult survival on waitlist), and the one-year graft survival and three-year graft survival rates.

- Transplant rate on waitlist (getting a deceased donor transplant faster): From the July SRTR Program Specific Reports (PSRs), this is defined as the number of patients on the waitlist transplanted within a year relative to the national experience.
- Pre-transplant mortality rate on waitlist (adult survival on waitlist): From the July SRTR PSRs, this is defined as the number of patient deaths that occurred while waiting for a transplant in a current year relative to the national experience.
- Graft failure survival rate: This is a measure of actual transplant program results compared with expected program results that are based on modeling transplant outcomes from all programs in the United States.



### Statistical Metric Definitions

- The number of graft failures for a program in the cohort are compared with the graft failures that are expected to have occurred. The expected numbers are derived from mathematical modeling that is based on the case mix of their transplant population. The ratios for each program are compared with the experiences of all transplant programs in the nation.
- The transplant rate is a calculation of the number of specific organ transplants performed by a program in a given year, as compared with the experience of all transplant programs in the nation. SRTR publishes the statistical factors/performance of transplant programs biannually in December and July. The SRTR PSRs contain information about the number of transplants performed during a two-and-a-half-year cohort. The exception is the transplant rate, which includes the rate of transplants performed in the most recent year.
- Pre-transplant mortality rate is defined as a calculation
  of the patient deaths in a transplant program after
  listing in a given year, as compared with the experience
  of all transplant programs in the nation.

# **Relative Performance Index (RPI)\***

LifeSOURCE analyzes the performance of transplant programs by calculating the Relative Performance Index (RPI). The RPI is determined by adding the values of SRTR ratings of the following metrics: the wait list transplant rate (getting a deceased donor transplant faster), the pre-transplant mortality rate (adult survival on wait list), the one-year graft survival rate and the three-year graft survival rate. The combined deceased and living donor wait list transplant rate replaces the the wait list transplant rate (getting a deceased donor transplant faster) for the liver and kidney transplant program RPI calculations.

The three-year graft survival rating is calculated by ranking the estimated observed to expected ratio of each program nationally and then into quintiles.

The one-year graft rate is weighted 50% higher than the other three metrics. The four metric ratings are totaled and divided into quintiles. Higher RPI/quintiles indicate better program performance.

## **Program Inclusion Guidelines**

Programs will be selected for the Designated network level when the overall performance ranking is in quintiles 2–5. Programs with performance in quintile1 will be selected for the Supplemental network level.



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<sup>\*</sup> The transplant waitlist rate metric is not calculated in the heart program RPI.