



TOKIO MARINE
HCC

HCC Life Insurance Company operating as
Tokio Marine HCC – Stop Loss Group

Organ & Tissue Transplant Insurance for Self-Funded Employers

To Be a Good Company

March 15, 2019

Overview

- The frequency of transplant operations in the United States has nearly doubled in the last 10 years
- The average cost of a transplant now exceeds \$475,000
- Advances in medical technology, donor awareness, and longer lifetime expectancies have afforded transplants as a highly sought after and viable cure for a number of dire illnesses
- Patients who need transplants are often put on waiting lists until a healthy organ can be procured, which allows Stop Loss carriers to shield themselves from the transplant exposure
- There are over 100 medical conditions that can lead to a transplant
- Organ transplants are a severity & frequency concern to employers

Transplant Facts

- Any group, regardless of size, can be hit by transplant exposures
- Number of people on waiting lists has tripled in past ten years
- Transplant technology has improved outcomes for survival; therefore, transplants have become a panacea for a number of disease categories
- Improved donor education and living organ transplant will continue to help increase frequency of transplants in ALL group sizes
- Nearly 25% of catastrophic costs in a group can be attributed to transplant exposures, which has significant effect on stop loss rates
- Someone new goes on a transplant waiting list every 10 minutes of every day

What is Transplant Insurance?

- A stand-alone, fully insured, first dollar product which covers organ and tissue transplant costs, typically including all transplant-related physician, hospital, drug, and most travel expenses
- Designed specifically for self-funded groups
- Works in conjunction with a self-funded plan by essentially “carving out” the transplant benefit and insuring it separately from the plan document
- Protects the employer from catastrophic expenses of transplant exposures more completely than stop loss
- Can attach to any plan document, regardless of the stop loss carrier

Why Sell Organ Transplant Insurance?

- Offers a solution to lasers and rate increases from stop loss carriers
- Provides a higher level of benefits for transplant patients
- Creates a competitive differential tool
- Increases persistency at renewal

Average Billed Charges per Transplant*

Organ Transplant	2011 Charges	2014 Charges	2017 Charges	2020 Charges
Heart/Lung	\$1,248,400	\$2,313,600	\$2,564,000	\$2,637,200
Intestine	\$1,206,800	\$1,547,200	\$1,147,300	\$1,240,700
Heart	\$997,700	\$1,242,200	\$1,382,400	\$1,664,800
Bone Marrow – Allogenic	\$805,400	\$930,600	\$892,700	\$1,071,700
Lung	\$561,200	\$785,000	\$861,700	\$929,600
Liver	\$577,100	\$739,100	\$812,500	\$878,400
Kidney/Pancreas	\$474,700	\$558,600	\$618,100	\$713,800
Bone Marrow – Autologous	\$363,800	\$378,000	\$409,600	\$471,600
Kidney	\$262,900	\$334,300	\$414,800	\$442,500
Pancreas	\$289,400	\$317,500	\$347,000	\$404,800

* Milliman Research Report: 2011, 2014, 2017 and 2020 U.S. organ and tissue transplant cost estimates and discussion

Number of Transplants*

Organ	2014 Transplants	2017 Transplants	2020 Transplants
Bone Marrow	21,169	21,444	24,695
Kidney	16,107	16,804	21,963
Liver	5,780	6,158	8,219
Heart	2,338	2,725	3,499
Lung/Double Lung	1,914	2,070	2,832
Kidney/Pancreas	777	724	900
Pancreas	150	136	126
Intestine	54	49	38

Total Transplants – 48,289 (2014) 50,110 (2017) & 62,272 (2020)

Waiting List Candidates – 105,947**

* Milliman Research Report: 2014, 2017 and 2020 U.S. organ and tissue transplant cost estimates and discussion

** United Network of Organ Sharing (UNOS), April 2022

Waiting Time for Transplants*

Organ	2011 Average Waiting Time	2014 Average Waiting Time	2017 Average Waiting Time
Kidney	877 days	679 days	685 days
Kidney/Pancreas	414 days	394 days	370 days
Pancreas	236 days	281 days	289 days
Liver	232 days	239 days	236 days
Intestine	207 days	181 days	224 days
Lung	181 days	185 days	186 days
Heart	180 days	191 days	213 days

- Milliman Research Report: 2017 and 2020 U.S. organ and tissue transplant cost estimates and discussion – based on data from the 2014 and 2017 U.S. Organ Procurement and Transplantation Network and the Scientific Registry of Transplant Recipients Annual Reports.

Transplant Probability*

by Group Size and Number of Years

Number of EEs	1 Year	3 Years	5 Years
100	16%	22%	28%
200	29%	39%	48%
300	40%	53%	63%
400	49%	63%	73%
500	57%	71%	81%
750	72%	85%	92%
1000	82%	92%	96%
1500	92%	98%	99%
2000	97%	99%	100%

* Exposures can include actual transplants as well as evaluated but not yet transplanted patients

* Statistics based on experience of Tokio Marine HCC – Stop Loss Group's organ transplant business from 2004 to 2021

Transplant Cost Driving Trends

- Warm perfusion machines
 - For hearts and lungs
 - Adds as much as \$100,000+ to already high organ procurement costs.
- Overuse of extracorporeal photopheresis
 - Charges of up to \$10,000 per treatment of GVHD* in allogeneic bone marrow transplants
 - Costs as high as \$640,000 post-transplant.
- Continued evolution of post BMT drugs
 - Enhance myeloablative effects and to prevent GVHD
 - Approximately \$50,000

* GVHD – graft versus host disease

Transplant Cost Driving Trends

- Kidney Transplant Procurement Cost Abuse
 - Bundling and billing costs not associated
 - Highly inflated rates - as high as \$200,000
- Premature evaluations of patients with liver disease
 - Prior to meeting standards set by national medical bodies
 - Approximately \$50,000
- Increased living donor kidney transplants impacting frequency

Ancillary Products vs. Carve Out Products

- Ancillary
 - Critical Illness
 - Mental Health
- Desired Carve Out Products
 - Premature babies
 - Specialty Drugs
 - Transplants

Transplants are only one known to have a carve out solution

Advantages of Carve Outs

- Carve outs provide predictability for a particular condition and can allow the company to trade unknown, highly variable claims expenses for known costs
- Carve outs generally include access to specialized medical networks and specified patient management by experienced medical personnel
- Complete medical management from start to finish can improve costs, improve outcomes and foster patient advocacy

How stop loss insurance affects the group

- Wait times can be more than a year, bridging over the contract year
 - As a result, a transplant has to be disclosed at renewal, thus becoming a **known** risk and subject to carrier rate-ups and lasering practices
- Lasers
 - Self-funded groups choose a specific deductible for their stop loss coverage; e.g., the amount the employer funds in claims on any one covered person before stop loss coverage kicks in
 - If an individual in the plan is discovered by the stop loss carrier as a high risk, he/she may be singled out, or **lasered**, meaning that a higher specific deductible is applied to the individual

Why Self-Funded Groups Buy Transplant Insurance

- A significant solution to lasers and rate-ups on self-funded plans
- The majority of stop loss carriers offer a discount for including a first dollar organ transplant carve-out product
- Carving out organ transplants makes financial sense
- Carving out organ transplants addresses both the severity and frequency of transplant risk
- Fully insured first dollar coverage means no deductible, no co-insurance or co-pays for the patient
- Generally offer significant benefit upgrades from the underlying health plan
- High degree of patient satisfaction

Risk Factors

- Frequency and cost of transplants are rising
 - Average cost is now \$475,000
- Organ donorship awareness is increasing
- More older people are getting transplants
- Bone Marrow Transplants/Stem Cell
- Average Transplant Composite Premium is \$10-\$14 PEPM
- A group of 200 people will have a transplant occur within 10 years
 - At \$10-\$14 PEPM annual premium is \$24,000 - \$33,600
 - Ten years of premium is \$240,000 - \$336,000
 - Average cost of \$475,000 = \$139,000+ in savings
- If this same group has an Allogeneic Bone Marrow Transplant*
 - Approximately \$900,000 paid
 - Savings equal \$564,000+

*Also called Stem Cell Transplant

“Sleep Well” Factor

- Even though a group may not have a transplant exposure for a few years, “when” is always a variable
- It is better to install a carveout in a self-funded group before an exposure occurs so as to guarantee complete coverage

Typical Policy Features and Benefits

- May cover all major transplant types
- “Episode of Care” generally from evaluation through 365 days post transplant
- Travel benefit for patient and companion may be provided
- May include specialized medical management and centers of excellence networks
- Typically includes Lifetime Maximum options, including Unlimited
- May include coverage for re-transplants
- Transplant Centers require a contract based on a “case rate” and/or “per diem,” a “% of savings,” or both if there are complications
 - Typically covered under the transplant policy
 - Centers of excellence don’t change the contract requirements and the severity of the claim

Underwriting Parameters

- Usually accepts groups down to 50 employees
- Front end disclosure requirements vary in depth of detail required
- Designed to be prospective coverage, NOT retrospective
- May include Pre-existing Condition clause
- Underwriting Philosophies
 - Pooled Concept
 - Case by case

Financial and Marketing Benefits to Transplant Insurance

- Carriers may discount their stop loss rates
- Eases transition from fully-insured to self-funded
- Option of choosing higher specific deductible for lower stop loss premium
- Creates more predictable budgeting
- High percentage of persistency
- Most policies allow for commission to producer
- Can improve loss ratio across book of business
- Direct claim payments to providers eliminates cash flow issues
- Considered to be a competitive differential
- Generally distributed through TPA's, Brokers, Consultants

Best Targets

- 500 employees and under with lower retentions – these groups generally can't afford the risk of a laser
- Large, completely self-funded groups – most don't want to sustain a single catastrophic hit such as transplants and may have a high-frequency issue
- Groups with potential transplant exposures that received lasers, or created havoc with their stop loss offer
- Groups that have never had a transplant exposure; the best time to buy transplant insurance is when the group is completely clean of exposures
- Groups coming from fully-insured
- Groups in Captives and Taft-Hartley
- Groups that haven't increased their specific deductible recently – helps to pay for the premium

