



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

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- 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

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- 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?

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- 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

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- 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

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- 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

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- 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

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- 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

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- 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

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- 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

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- 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

