Glossary of Terms

**Absorption** – The degree and speed at which a drug enters the bloodstream from the small intestine.

**Acute Hepatitis** – An inflammation in the liver that lasts less than six months.

**Acute Rejection** – The body’s attempt to destroy the transplanted organ. Acute rejection usually occurs in the first year after transplant.

**Acute Tubular Necrosis (ATN)** – Reversible kidney damage resulting in delayed kidney function. Among other factors, it may be caused by the quality of donor organ, the time the organ was stored before transplantation, or medications used to prevent rejection.

**ADA** – Americans with Disabilities Act of 1990.

**Administrative Fee** – An amount of money charged by an organization handling fundraising money.

**Adverse Reaction** – An unintended side effect from a drug.

**Advocacy Organization** – A group that helps someone get what they need or want, promotes a certain point of view, or pleads the case of another.

**Albumin** – A protein made by the liver.

**Alcoholic Cirrhosis** – A chronic inflammation of the liver caused by excessive alcohol intake. People who quit drinking can significantly improve liver function in as little as six months.

**Alcoholic Hepatitis** – An inflammation of the liver caused by alcohol.

**Alkaline Phosphatase** – An enzyme that may be increased in some liver and bile duct diseases.

**Allocation** – The process of determining how organs are distributed. Allocation includes the system of policies and guidelines that are followed to ensure that organs are distributed fairly to those waiting for them.

**Allograft** – An organ or tissue that is transplanted from one creature to another of the same species, such as human to human. An example would be a transplanted kidney.
**Alpha-1 Antitrypsin Deficiency** – A hereditary disease that may lead to hepatitis and cirrhosis.

**Alpha-fetoprotein (AFP)** – An abnormal protein that may be found in liver cancer. AFP levels that are slightly abnormal may be in those with chronic hepatitis or cirrhosis.

**ALT (SGPT)** – The abbreviation for alanine aminotransferase, an enzyme found in high levels in the blood when the liver is inflamed.

**Anatomy** – The structure of the body and the relationship of the parts of the body.

**Anesthetic** – Medication that reduces pain by dulling sensations.

**Antibody** – A substance produced by the body in response to an infection. Antibodies help fight infections, thus producing immunity to the infecting organism. Some antibodies, like the hepatitis C antibody, are not effective in neutralizing the organism and are not markers of recovery.

**Antigen** – A foreign substance, such as a transplanted organ, that triggers the body to try to reject it.

**Anti-rejection Drugs (Immunosuppressive Drugs)** – Drugs that reduce the body’s ability to reject the transplanted organ.

**Arteriogram** – An X-ray of an artery after a dye has been injected.

**Ascites** – Accumulation of fluid in the abdominal cavity, most commonly a result of cirrhosis.

**AST (SGOT)** – The abbreviation for aspartate aminotransferase, an enzyme found in high levels in the blood when the liver is inflamed.

**Asymptomatic** – Free of symptoms.

**Auto-immune Hepatitis (AIH)** – A form of liver inflammation in which the body’s immune system attacks liver cells.

**Bacteria** – Small organisms (germs) that can cause disease.

**Baraclude® (entecavir)** – an orally administered drug for the treatment of hepatitis B.

**Beneficiary** – The person who receives the benefits of an insurance policy.
**Benefits** – Services that are paid for by an insurance policy.

**Benign** – Benign indicates not malignant; not recurrent; favorable for recovery.

**Bile** – A fluid produced by the liver, stored in the gall bladder, and released into the small intestine to help absorb dietary fats.

**Bile Ducts** – The tubes through which bile flows.

**Bile Leak** – A hole in the bile duct system causing bile to spill into the abdominal cavity.

**Biliary Atresia** – A disease of young children that prevents proper development of the main bile ducts connecting the liver to the intestinal tract – resulting in obstruction and cirrhosis of the liver usually within the first year of life.

**Biliary Stenosis** – The narrowing or constriction of a bile duct.

**Biliary Tree** – All passageways inside and outside the liver that carry bile to the intestines.

**Bilirubin** – Bile pigments. Increased bilirubin levels cause yellowing of the eyes and skin (jaundice) and may be a sign of liver disease or bile duct abnormalities.

**Bioavailability** – A measure of how much of an administered drug is absorbed into the bloodstream, actually reaching the intended site of action in the body. For example, medicine is absorbed from the GI tract, travels through the bloodstream, and reaches the organ tissues, where it works to fight infection, prevent rejection, etc.

**Biopsy** – A procedure where a sample of tissue is removed from the body by a needle so it can be examined under the microscope.

**Bladder** – The part of the urinary tract that receives urine from the kidneys and stores it until urination.

**Blood Urea Nitrogen** – A by-product of protein breakdown in the body.

**Blood Vessels** – The veins, arteries, and capillaries through which blood flows. Blood vessels can be donated and transplanted.

**Brain Death** – When the brain has permanently stopped working, as determined by the physician. Machines may maintain functions such as heartbeat and breathing for a few days, but not permanently.
**Budd-Chiari** – Clotting of the hepatic vein which is the main vein leaving the liver.

**BUN** – Stands for blood urea nitrogen, a waste product normally secreted by the kidney. BUN values represent how well the kidneys function.

**Cadaver** – A dead body.

**Cadaveric** – Refers to things about, or relating to, a dead body.

**Cadaveric Donor** – An individual who has recently died of causes that do not affect the function of an organ to be transplanted. Either the person or the person’s family has generously offered organs and/or tissues for transplantation.

**Carcinoma** – A malignant new growth; a type of cancer.

**Cardiac** – Having to do with the heart.

**Cessation** – The act of ceasing; halt.

**Cholangiocarcinoma** – A primary malignant tumor (cancer) of the liver originating in bile duct cells.

**Cholestasis** – A blockage of bile in the liver or bile ducts.

**Chronic** – A condition that develops slowly and lasts for a long time, even the rest of the patient’s life, for example, kidney failure.

**Chronic Hepatitis** – Hepatitis infection that lasts longer than six months.

**Chronic Rejection** – Slow failure of the transplanted organ.

**Cirrhosis** – An advanced stage of liver disease in which functioning liver cells are reduced in numbers and surrounded by scar tissue. Cirrhosis may be caused by viruses, alcohol, inherited metabolic diseases or drugs.

**Cirrhotic** – Pertaining to or characterized by cirrhosis.

**CMV (Cytomegalovirus)** – A virus infection that is very common in transplant recipients; it can affect the lungs and other organs as well; a member of the family of herpes viruses.

**Coagulation** – Blood clotting.
**Coalition on Donation** – A non-profit alliance of health and science professionals, transplant patients and voluntary health and transplant organizations. The Coalition works to increase public awareness of the critical organ shortage, to create a greater willingness and greater commitment to organ and tissue donation.

**Co-insurance** – A percentage of money insured persons must pay toward a service insurance will cover. A typical amount is 20% — patients pay 20% of the doctor’s bill and insurance pays 80%.

**Cold Ischemia Time** – The time an organ is without blood circulation – from the time of removal of the organ from the donor to the time the organ is transplanted into the recipient.

**Copayment (copay)** – A flat fee that a person pays for health care services in addition to what the insurance company pays, for example, a $10 copayment for each visit to the doctor.

**Corticosteroid** – A hormone produced by the body but given as a synthetic (manufactured) medicine to suppress the body’s normal reaction (immune response) to infection and foreign tissue, such as a transplanted organ. Prednisone is an example of a synthetic hormone.

**Coverage Date** – The day insurance benefits begin.

**Covered Benefit** – A service that an insurance company will provide payment toward.

**Creatinine** – A substance found in blood and urine; it results from normal body chemical reactions; high blood creatinine levels are a sign of depressed kidney function.

**Criteria (Medical Criteria)** – A set of standards or conditions that must be met.

**Cryptogenic Cirrhosis** – A cirrhosis of obscure or unknown origin.

**Deductible** – A fixed amount of money that must be paid for covered health care expenses before the insurance company starts to pay. This is usually a yearly amount of $250, $500, $1,000 or more.

**Deficiency** – A lack or a defect.

**Delayed Function** – A condition in which the transplanted organ does not work well right after the transplant.

**Department of Health and Human Services (HHS)** – The department of the Federal Government is responsible for health-related programs and issues, including overseeing the OPTN and SRTR contracts and developing organ, tissue and bone marrow donation programs.
Dependents – Those persons who also receive insurance benefits on an insurance policy, for instance, a spouse or child.

Diabetes – A disease in which patients have high levels of sugar in their blood.

Dialysis – The use of a machine to correct the balance of fluids and chemicals in the body and to remove wastes from the body when kidneys are failing. (See hemodialysis.)

Diastolic Blood Pressure – The bottom number in blood pressure (80 in a blood pressure of 120/80), which indicates the pressure in the arteries when the heart is at rest.

Disability (Disabled) – A considerable limitation in major life activity that cannot be helped with the use of a corrective device or medication. A disabled person is someone who is unable to perform the necessary functions of many jobs with or without reasonable modification.

Disability Determination Service – A State agency that reviews eligibility for vocational rehabilitation.

Disability Insurance – A type of insurance that provides an income if illness or injury prevents a person from being able to work for an extended period of time.

Diuretic – An agent that increases the output of urine.

DNA – The abbreviation for deoxyribonucleic acid, the substance that is the building block of all living things.

Donor – Someone from whom an organ or tissue is removed for transplantation.

Donor Card – A document that indicates a person’s wish to be an organ donor.

Donor Pool – A group of people eligible to donate an organ.

Durable Power of Attorney – A legal document in which someone is named to make medical decisions for a person when they are unable to speak for themselves.

Edema – Swelling caused when the body retains too much fluid, also called “water weight.”

Electrocardiogram – A recording of the electrical activity of the heart.

Electrolyte – Generally refers to the dissolved form of a mineral such as sodium, potassium, magnesium, chlorine, etc.
**ELISA** – A blood test used to measure the presence of hepatitis C antibodies in blood.

**Encephalopathy** – Damage to the brain and central nervous system caused by toxins not filtered out of the blood by the liver.

**End-stage Organ Disease** – A disease that leads to permanent failure of an organ.

**Enzyme** – Cellular proteins that begin or assist chemical reactions within the body.

**Entecavir** - also known as Baraclude® for treatment of Hepatitis B.

**Epivir HBV®** – Also known as Lamivudine for treatment of hepatitis B.

**Evidence of Insurability** – Proof that a person is healthy enough for a particular insurance company to insure them.

**Exclusion** – Medical services that are not paid for by an insurance policy.

**Experimental** – New treatments, procedures or drugs that are being tested. Insurance companies usually do not pay for anything considered experimental.

**Federally Mandated** – Required by federal law.

**Fibrosis** – Scarring. Fibrosis in the liver is usually a result of long-standing injury and precedes cirrhosis.

**Foreign Body** – An entity that enters the body that is not supposed to be there, such as a germ, a piece of glass, a splinter or a transplanted organ or tissue. The body normally attacks or tries to reject a foreign body to prevent further injury.

**Foundation** – An institution that provides funds for causes, issues, groups, people, etc. A foundation often has a particular interest or interests and solicits donations from those who support those interests. Some foundations help patients and their families with medical expenses.

**Fulminant** – Happening very quickly and with intensity, for example, fulminant liver failure or fulminant infection.

**Fungal Disease** – An infection that usually occurs in patients during treatment with steroids or immunosuppressants. Examples of fungal infections include candida, aspergillus, and histoplasmosis, which tend to be systemic infections.
**Gallbladder** – A muscular sac attached to the liver which stores bile.

**Gastroenterologist** – A physician who specializes in the treatment of diseases of the digestive tract, including the liver.

**Gender** – The particular sex of an individual – male or female.

**Genetic** – Referring to heredity, birth or origin.

**Gingival Hypertrophy** – The enlargement of the gums, a common side effect of cyclosporine therapy, which can be managed with good oral hygiene.

**Glucose** – A type of sugar found in the blood.

**Glycogen** – The chief carbohydrate storage material.

**Graft** – A transplanted organ or tissue.

**Graft Survival Rate** – The percentage of patients who have functioning transplanted organs (grafts) at a certain point in time. The data is usually measured in one-, three- and five-year time periods.

**Grant** – An amount of money given as a gift, usually for a specific use.

**Group Insurance** – Typically offered through employers, although unions, professional associations and other organizations also offer group insurance. Most, if not all, of the premium is paid by the employer.

**Gynecology** – A medical specialty focusing on a woman’s reproductive organs.

**HAV** – The abbreviation for the hepatitis A virus.

**HBV** – The abbreviation for the hepatitis B virus.

**HCV** – The abbreviation for the hepatitis C virus.

**HCV Genotype** – Hepatitis C can be divided into six genotypes (1 – 6). Each genotype can be divided into subtypes (a, b, c…). Type 1 is most common and accounts for 70% of hepatitis C infections in the United States. Patients with genotype 1 have lower response to treatment than patients with genotypes 2 or 3.
Health Maintenance Organization (HMO) – An insurance plan where employers pay a fixed monthly fee for services, regardless of the level of care. Patients must usually see a primary care physician, then are referred to a specialist.

Hematocrit – A measure of the red blood cell content of blood.

Hemochromatosis – An inherited condition that causes the body to absorb and store too much iron.

Hemodialysis – A treatment for kidney failure whereby the patient’s blood is passed through a machine to remove excess fluid and wastes. The procedure usually takes about three to four hours per session and is usually done three times per week.

Hemorrhage – A rapid loss of a large amount of blood or excessive bleeding.

Hepatic – Having to do with, or referring to, the liver.

Hepatic Artery – The hepatic artery is one of the primary blood vessels that supplies blood to the liver.

Hepatic Encephalopathy – A condition usually occurring secondarily to advanced disease of the liver which is marked by disturbances of consciousness which may progress to deep coma, psychiatric changes of varying degree, flapping tremor and increased ammonia levels.

Hepatitis – Inflammation of the liver caused by viruses, infections, chemicals or drugs.

Hepatitis A – A form of acute, self limiting hepatitis that is transmitted via contaminated food or water. Hepatitis A does not progress to chronic infection and will not lead to cirrhosis.

Hepatitis B – Inflammation in the liver caused by the Hepatitis B virus.

Hepatitis B Surface Antibody (Anti-HBs) – A marker of immunity to hepatitis B infection. Immunity can be acquired from vaccine or a previous hepatitis B infection.

Hepatitis B e Antigen (HBeAg) – A marker that can be detected through a blood test. Presence of HBeAg is an indication that the hepatitis B virus is actively multiplying.

Hepatitis B Surface Antigen (HBsAg) – A marker of hepatitis B infection. Test for HBsAg is used to screen for HBV infections. Further tests are needed to determine if the virus is active.
Hepatitis B DNA (HBV DNA) – The marker of active hepatitis B infection.

Hepatitis C – Inflammation of the liver caused by the hepatitis C virus.

Hepatitis C Antibody (anti-HCV) – This is a marker of hepatitis C infection. Presence of Anti-HCV is usually an indication of active HCV infection. However, anti-HCV can also be detected in individuals who have recovered from hepatitis C.

Hepatitis C RNA (HCV RNA) – A marker of active hepatitis C infection.

Hepatocellular Carcinoma (HCC) – Liver cancer, which starts in the cells of the liver.

Hepatologist – A physician who specializes in the treatment of liver diseases.

Hepatomegaly – An enlarged liver.

Herpes – A family of viruses that infect humans; herpes simplex causes lip and genital sores; herpes zoster causes shingles.

High Blood Pressure (Hypertension) – High blood pressure occurs when the force of the blood pushing against the walls of the blood vessels is higher than normal because the blood vessels have either become less able to stretch or have gotten smaller. High blood pressure causes the heart to pump harder to move blood through the body. High blood pressure can cause kidney failure and heart disease if not treated.

Hirsutism – An excessive increase in hair growth. It is a common side effect of some drugs and can be controlled with waxing, hair removal creams or shaving.

Human Immunodeficiency Virus (HIV) – A virus that destroys cells in the immune system, resulting in the eventual inability of the body to fight off infections, toxins, poisons, or diseases. HIV causes AIDS (acquired immunodeficiency syndrome), a late stage of the HIV infection that can include serious infections, blindness, some types of cancers and neurological conditions such as senility.

Hypertension – See high blood pressure.

Illicit – Forbidden by custom or law; unlawful.

Immunity – The ability of the body to recognize harmful or foreign substances and eliminate them without injury to itself.
**Immune System** – A system within the body that continually monitors for harmful or foreign substances that may damage the body.

**Immunosuppression** – The artificial suppression of the immune response, usually through drugs, so that the body will not reject a transplanted organ or tissue. Drugs commonly used to suppress the immune system after transplant include Prednisone, azathioprine (Imuran), cyclosporine (Sandimmune, Neoral), mycophenolate mofetil (Cellcept) and tacrolimus (Prograf, FK506).

**Immunosuppressive** – Relating to the weakening or reducing of the immune system’s response to foreign material. Immunosuppressive drugs reduce the immune system’s ability to reject a transplanted organ.

**Infection** – A condition that occurs when a foreign substance enters the body, causing the immune system to fight the intruder. Transplant recipients can get infections more easily because their immune systems are suppressed. It is more difficult for them to recover from infection, such as a urinary tract infection, colds and the flu.

**Inflammation** – A tissue reaction to irritation, infections or injury marked by localized heat, swelling, pain, redness and sometimes loss of function.

**Informed Consent** – The process of reaching an agreement based on a full disclosure and full understanding of what will take place. Informed consent often refers to the process by which one makes decisions regarding medical procedures, including the decision to donate the organs of a loved one.

**Inpatient Treatment** – Treatment in the hospital involving at least one overnight stay.

**Insurance Benefits** – Services paid for by an insurance company.

**Intensive Care Unit (ICU)** – A unit in the hospital that has highly technical and sophisticated monitoring devices and equipment for seriously ill patients. The staff is specially trained to take care of these patients who are often critically ill or recovering from surgery.

**Interferon** – A protein that is made by the body in response to virus infections. Interferon is approved for the treatment of chronic hepatitis B and chronic hepatitis C.

**Intravenous (IV)** – Within a vein or veins, usually refers to medication or fluids that are infused into a vein through a plastic catheter (narrow tube) or “line” inserted into the vein.
Investigational – A drug or procedure that is in a research phase and has not yet been approved for patient use by the Federal Drug Administration (FDA). Insurance companies normally do not pay for investigational drugs or procedures.

ISHAK Score – A scoring system for liver biopsies that incorporates measures of necrosis, inflammation and fibrosis. Score ranges from 0 (zero) to 6 (six) with zero indicating no fibrosis and six indicating cirrhosis, probable or definite.

Jaundice – A yellow discoloration of the skin caused by the buildup of bile pigments in the blood. Jaundice may be caused by liver diseases or obstruction of bile ducts. Rarely, jaundice may be caused by excessive breakdown of red blood cells.

Kidneys – A pair of organs that remove wastes from the body through the production of urine. The blood supply in the body passes through the kidneys about 20 times every hour. Kidneys can be donated from living or deceased donors and transplanted into patients with kidney failure.

Lactulose/kristalose – A medication used for hepatic encephalopathy. This medication changes bacteria in the gut and increases bowel movements. Please refer to page 27 in the Medical Evaluation section for information on this medication.

Lamivudine (Epivir HBV®) – An orally administered drug for the treatment of hepatitis B infection.

Leukocyte – A white blood cell.

Lifetime Maximum – The total amount of money an insurance company will pay out for covered expenses during the insured’s lifetime. Typical amounts are $150,000 up to $5,000,000. Once the insured has reached the lifetime maximum, they no longer have insurance benefits. It is important for patients to know how their insurance dollars are being spent.

Liver – The liver is located in the upper right abdomen and is a spongy mass of wedge-shaped lobes. The liver secretes bile which aids in digestion, helps process proteins, carbohydrates and fats, and stores substances like vitamins. The liver also removes wastes from the blood. The liver can be donated and transplanted. Living donors can give part of their liver.

Liver Biopsy – A procedure to remove a small piece of the liver by inserting a needle through the right upper abdomen. The liver tissue is examined under the microscope to assess the integrity of the liver cells.
Liver Enzymes – Substances produced by the liver and released into the blood; these are measured to assess liver function.

Liver Failure – A condition in which the liver no longer carries out, or adequately carries out, its functions in the body. Liver failure may present as fatigue, jaundice, swelling (retention of fluid in the legs and abdomen), bleeding from the stomach and mouth, confusion and decreased levels of consciousness (encephalopathy).

Living Related Donor (LRD) – A biologic family member who donates a kidney or part of a lung, liver, or pancreas to another family member, such as a sister, or a parent to a child.

Living Unrelated Donor – A person who is not related by blood, who donates a kidney or part of a lung, liver, or pancreas to another person, such as a husband who donates to a wife.

Malignant – Malignant indicates the tendency of a cancer or tumor either to invade the surrounding tissues, to destroy or replace the tissues previously present, or to metastasize (spread to other parts of the body). Not all malignant tumors cause death in patients.

Malignancy – A growth that has become malignant. See “Malignant.”

Managed Care – A term used to describe insurance programs that try to control health costs by limiting unnecessary treatment. Health maintenance organizations (HMOs), preferred provider organizations (PPOs) and point-of-service (POS) plans and utilization review are all forms of managed care.

Match – The degree of compatibility, or likeliness, between the donor and the recipient.

Medicaid – A partnership between the federal government and individual states to share the cost of medical coverage for welfare recipients and to allow states to provide the same coverage to low-income workers not eligible for welfare. Programs vary greatly from state to state.

Medically Necessary – A specific health care service or supply that your insurance company has determined is required for your medical treatment and also is the most efficient and economical way to provide that service. Examples would be having a minor surgical procedure performed in the doctor’s office instead of staying overnight in a hospital, or renting rather than buying a piece of medical equipment.

Medicare – The federal government program that provides hospital and medical insurance through Social Security taxes to people aged 65 and over, those who have permanent kidney failure, and certain people with disabilities.
**Medicare-Approved Facility** – A facility that meets Medicare standards for the number of transplants they do and the quality of patient outcomes.

**Medigap Policy** *(MedSupp, Medicare Supplementary)* – Private insurance that helps cover some of the gaps in Medicare coverage.

**Metabolic Liver Disease** – Liver enzyme deficiencies that prevent carbohydrate, fat, protein and vitamin metabolism, which can lead to cirrhosis of the liver or result in serious diseases in other organs and tissues.

**Metabolism** – A general term applied to the chemical processes taking place in the body.

**Mortality** – Death (mortality rate = death rate).

**Multiple Listing** – Being on the organ transplant waiting list at more than one transplant center.

**National Organ Transplant Act (NOTA)** – Passed by Congress in 1984, NOTA initiated the development of a national system for organ sharing and a scientific registry to collect and report transplant data. It also outlawed the sales of human organs.

**Nonalcoholic Fatty Liver Disease (NAFLD)** – An accumulation of fat in the liver which can range from simple steatosis to NASH.

**Nonalcoholic Steatohepatitis (NASH)** – Inflammation of the liver associated with the accumulation of fat in the liver which causes damage to the liver.

**Noncompliance** – Failure to follow the instructions of the medical team, such as not taking medicines properly or not attending clinic appointments. Noncompliance can lead to the failure of a transplanted organ.

**Nonfunction** – A condition in which a transplant organ fails to work after being transplanted into a recipient.

**OPO Service Area** – Each OPO provides organ procurement services for transplant centers throughout the United States. An OPO service area can include a portion of a city, a portion of a state or an entire state. OPOs distribute organs according to established allocation policy.

**Orally** – By mouth.

**Organ** – A part of the body, made up of various types of tissues, that performs a particular function. Transplantable organs are the heart, liver, lungs, kidneys, pancreas and intestines.
**Organ Donation** – To give an organ, such as a kidney, to someone in need of that organ, or to have organs removed for transplantation after death.

**Organ Preservation** – Donated organs require special methods of preservation to keep them viable between removal and transplantation. Without preservation, the organs will deteriorate. The length of time organs and tissues can be kept outside the body varies depending on the organ, the preservation solution and the preservation method (pump or cold storage). Common preservation times vary from two to four hours for lungs to 48 hours for kidneys.

**Organ Procurement or Organ Recovery** – The act of surgically removing an organ from a donor for transplantation.

**Organ Procurement and Transplantation Network (OPTN)** – In 1984, Congress passed the National Organ Transplant Act (NOTA) that mandated the establishment of the OPTN and Scientific Registry of Transplant Recipients. The purpose of the OPTN is to improve the effectiveness of the Nation’s organ procurement, donation and transplantation system by increasing the availability of and access to donor organs for patients with end-stage organ failure. OPTN members include transplant centers, OPOs, histocompatibility laboratories, voluntary health care organizations and the public. UNOS contracts with the Federal Government to operate OPTN.

**Organ Procurement Organization (OPO)** – OPOs serve as the vital link between the donor and recipient and are responsible for the identification of donors and the removal, preservation and transportation of organs for transplantation. OPOs also collect data on deceased donors for the Scientific Registry. As a resource to the community, OPOs engage in public and professional education on the critical need for organ donation. Currently, there are 59 OPOs around the country. All are OPTN members.

**Organ Rejection** – An attempt by the immune system to reject or destroy what it recognizes to be a “foreign” presence (for example, a transplanted liver).

**Out-of-Pocket Expenses** – The portion of health costs that must be paid by the insured person per year, including deductibles, copayments and co-insurance.

**Outpatient Care (Ambulatory Care)** – Medical testing or treatment done without an overnight hospital stay, performed in a hospital setting or doctor’s office.

**Peritoneal Dialysis** – A method of purifying the blood by flushing the abdominal cavity with a dilute salt solution.

**Placebo (Dummy)** – An inactive substance with no direct medical benefits. Often used in clinical trials to determine if the test drug is safe and effective.
Platelet – A small blood cell needed for normal blood clotting.

Polycystic Liver Disease – An inherited disorder characterized by lesions throughout the liver.

Pool – A group of people or objects with a similar characteristic or function.

Portal Hypertension – Higher than normal pressure within the vessels of the liver. Left untreated, this may result in development of collateral vessels in the esophagus, stomach and intestines, which may rupture leading to bleeding (variceal bleeding) and ascites.

Potassium – A mineral essential for body function.

Potential Transplant Recipient – A transplant candidate who has been ranked by the OPTN computer match program as the person to whom an organ from a specific deceased organ donor is to be offered.

Pre-Authorization (Pre-certification) – The process of notifying and getting approval from your insurance company before you proceed with an elective (non-emergency) medical procedure. If the insurance plan requires pre-certification and it is not obtained, the insured will be responsible for a larger portion of the cost.

Pre-Existing Condition – Any disease, illness, sickness or condition that was diagnosed or treated by an insurance company in the 12 months before the start date of insurance coverage; also, anything that caused symptoms in those 12 months that causes the insured to seek medical care.

Preferred Provider Organization (PPO) – A group of hospitals or physicians who have signed a contract with a particular insurance company to provide care to their members, usually at a discount. With a PPO plan, the cost of care is usually lower if the insured uses one of the designated providers.

Premium – Amount paid to an insurance company for providing medical or disability coverage under a contract.

Primary Biliary Cirrhosis (PBC) – Chronic liver disease that causes slow, progressive destruction of the bile ducts.

Primary Sclerosing Cholangitis (PSC) – A disease in which the bile ducts inside and outside the liver become narrowed due to inflammation and scarring.

Private Health Plan – An insurance policy obtained by an individual, not through an employer.
**Procurement** – The surgical procedure of removing a donated organ or tissue.

**Prophylactic Medication** – Medication that helps prevent disease.

**Protein** – The fundamental building blocks of all living things.

**Pulmonary** – Having to do with, or pertaining to, the lungs.

**Recipient** – A person who has received a transplant.

**Recombinant Immunoblot Assay (RIBA)** – A blood test used to detect the presence of hepatitis C antibodies. This is a second line test used to confirm an ELISA/EIA test result. Used to determine if the individual has been truly exposed to hepatitis C.

**Recovery or Retrieval** – The surgical procedure of removing an organ or tissue from a donor.

**Rejection** – When the body attacks a transplanted organ or tissue because it reacts to the organ or tissue as a foreign object. Anti-rejection (immunosuppressive) drugs help prevent rejection.

**Renal** – Have to do with, or referring to, the kidneys.

**Re-Transplantation** – Due to rejection or failure of a transplant organ, some patients receive another transplant after having returned to the waiting list.

**Ribavirin** – An orally administered antiviral drug that when used in combination with interferon can suppress the hepatitis C virus and reduce liver damage.

**Risk Pools** – High-risk health insurance plans, called risk pools, have become an important safety net for individuals who are denied health insurance because of a medical condition. About 30 states operate risk pools to provide health coverage for individuals who, because of their physical condition, are unable to purchase health insurance at any price.

**Routine Referral** – Hospitals are required on or before each death to call the OPO in order to determine suitability for organ, eye and tissue donation. The OPO, in consultation with the patient’s attending physician or his or her designee, will determine the suitability for donation.

**Sarcoidosis** – A systemic disease of unknown origin; involves inflammation that produces lumps of cells in various organs of the body.
Scientific Registry of Transplant Recipients (SRTR) – In 1984, Congress passed the National Organ Transplant Act that mandated the establishment of the Organ Procurement and Transplantation Network and SRTR. The purpose of the SRTR is to provide ongoing research to evaluate information about donors, transplant candidates and recipients, as well as patient and graft survival rates. The SRTR contains historical data from October 1, 1987 to the present. The registry tracks all transplant patients from the time of transplant through hospital discharge, and then annually for up to three years or until graft failure or death. MMFR (Minneapolis Medical Research Foundation) operates the SRTR under contract with the Federal Government.

Second Opinion – A medical opinion provided by a second physician or medical expert after one physician has provided a diagnosis or recommended treatment to an individual.

Sensitized – Being immunized, or able to mount an immune response, against an antigen by previous exposure to that antigen.

Seroconversion – The loss of an antigen and the development of detectable antibodies to the antigen.

Shingles – A herpes infection (Herpes Zoster) that usually affects a nerve, causing pain in one area of the body.

Side Effect – An unintended reaction to a drug.

Social Security Administration – A federal government program best known for its retirement benefits. The monthly benefit is determined by the salary of the individual and the number of years covered by the program. The Social Security Administration also administers disability benefits.

Sodium – A component of table salt (sodium chloride) an electrolyte that is the main salt in blood.

Spend Down – For disabled people who have higher incomes but cannot pay their medical bills. Under this program, a person pays part of his or her monthly medical expenses (the spend down), then Medicaid steps in and pays the rest. Eligibility is determined on a case-by-case basis.

Status – The degree of medical urgency for patients on the waiting list for a liver transplant.

Steatosis – Accumulation of fat in the liver; known as fatty liver.

Steatohepatitis – Fat in the liver (steatosis) with the presence of inflammation or hepatitis.

Stricture or Stenosis – A narrowing of passage in the body.
Supplemental Policy (Medigap policy) – An insurance policy offered by private insurance companies, not the government, designated to pay for some of the costs that Medicare does not cover. These policies have limited coverage for medications.

Survival Rates – Survival rates indicate what percentage of patients are still living or transplanted organs still functioning after a certain amount of time. Survival rates are used in developing organ allocation policy. Because survival rates improve with technological and scientific advances, policies that reflect and respond to these advances are expected to improve survival rates.

Systolic Blood Pressure – The top number in blood pressure readings; the 120 in a blood pressure of 120/80. It measures the maximum pressure exerted when the heart contracts.

Termination of Benefits – Health insurance benefits stop when an individual has reached the lifetime maximum amount or when an individual is no longer eligible for the plan due to nonpayment of premiums or leaving his or her job.

Thoracic – Referring to the heart, lungs or chest.

Thrush – A fungus infection in the mouth.

Tissue – An organization of similar cells that perform a special function. Examples of tissues that can be transplanted are blood, bones, corneas, heart valves, ligaments, veins and tendons.

Transmission – The transfer of an infection from one person to another.

Transplant, Transplantation – To transfer a section of tissue or complete organ from its original position to a new position, for example to transfer to a healthy organ from one person’s body to the body of a person in need of a new organ.

Transplant Candidate – An individual who has been identified as medically suited to benefit from an organ transplant and has been placed on the waiting list by the transplant program.

Transplant Physician – A physician who provides non-surgical care and treatment to transplant patients before and after transplant.

Transplant Program – A component within a transplant hospital which provides transplantation of a particular type of organ.

Transplant Recipient – A person who has received an organ transplant.

Transplant Surgeon – A physician who provides surgical care to transplant recipients.
**Triglycerides** – A form of fat that the body makes from sugar, alcohol and excess calories.

**T-Tube** – A tube placed in the bile duct that allows bile to drain into a bag outside the body.

**United Network for Organ Sharing (UNOS)** – A nationwide umbrella for the transplant community; a non-profit organization that administers and maintains the nation’s organ transplant waiting list under contract with the Health Resources and Services Administration of the U.S. Department of Health and Human Services. Located in Richmond, Virginia, UNOS also brings together medical professionals, transplant recipients and donor families to develop organ transplantation policy.

**Urinary Tract Infection (UTI)** – An infection of one or more parts of the urinary tract.

**Usual and Customary (U&C) Fee** – The fee that providers, of similar training and experience, charge for a service in a particular geographical area. If a provider charges more than the U&C fee, insurance companies may limit their payment to the level of the U&C, leaving the patient responsible for the balance due.

**Vaccine** – A preparation given to simulate immunity to infections, organisms (such as bacteria) and viruses.

**Varices (Esophageal)** – Swollen veins at the bottom of the esophagus, near the stomach – a common condition caused by increased pressure in the liver. Varices can ulcerate and bleed.

**Vascular** – Referring to blood vessels and circulation.

**Ventilator** – A machine that forces air into the patient’s respiratory system when the patient is not able to breathe properly.

**Virus** – A microscopic particle that can only survive by invading other living things, usually causing illness.

**Waiting List (Waiting Pool)** – After evaluation at the Transplant Center, a patient is added to the national waiting list by the transplant center or organ procurement organization. Lists are specific to each organ type: heart, lung, kidney, liver, pancreas, intestines. Each time a donor organ becomes available, the UNOS computer generates a new list of potential recipients.

**White Blood Cell** – White blood cells are the basic building blocks of the body’s immune system.

**Wilson’s Disease** – An inherited disorder in which excessive amounts of copper accumulate in the body.
The Safe Use of Acetaminophen

Acetaminophen

Acetaminophen, commonly known as Tylenol®, is widely used for pain and fever in children as well as adults. Many prescription and over-the-counter pain and cold medications contain acetaminophen, and it is important that you do not take too much. In some cases, too much acetaminophen is taken because several medications with acetaminophen are used at the same time. Taking too much acetaminophen can be harmful.

A Safe Dose of Acetaminophen?

If you take more acetaminophen than is recommended, you can damage your liver. The liver can be damaged in adults after taking a single dose of 10 to 15 grams, about 31 to 47 regular Tylenol tablets. Smaller doses taken over longer time periods may also cause liver toxicity. Liver damage from acetaminophen can be so severe that a liver transplant may be needed. Very high doses (10 to 25 grams) of acetaminophen can cause death. With liver disease a safe dose is no more than 2 grams (2,000 mg) of acetaminophen in 24 hours, no more than four out of 7 days per week. 2,000 mg equals six regular or four extra strength pills.

Avoiding Acetaminophen Toxicity

- Check the labels of all prescription and over-the-counter medications you take to see if they contain acetaminophen.
- Do not take more than the recommended daily dose of acetaminophen. For patients with liver disease that is no more than 2,000 mg in 24 hours, no more than four out of seven days per week.
- When adding up your daily acetaminophen dose, be sure to include all the acetaminophen you take in prescription and over-the-counter products.
- Carefully read the labels of children and infant forms of acetaminophen for dosage information; always use the measuring cup or spoon that comes with the medication.
- Do not use high doses of acetaminophen for a long period of time unless recommended by your hepatologist.
- Do not drink alcohol while you are taking acetaminophen. Heavy alcohol use may increase the risk of toxicity. All patients in the transplant process must not drink alcohol.
- Eat regular meals when taking acetaminophen.
• Ask your pharmacist or doctor before taking a new medication to screen for acetaminophen content or other drug interactions. If you have questions about a medication, please contact your transplant RN at (800) 395-6431 Option 2.

You may take acetaminophen as advised above. Do not take NSAID's (Motrin, Ibuprofen, Advil) or aspirin unless advised by a cardiologist and approved by your liver doctor.

Some Products That Contain Acetaminophen

Some commonly used products that contain acetaminophen are:

• Acetaminophen (generic and Tylenol® brands) caplets, capsules, tablets, chewable tablets, liquids (Children’s acetaminophen, Infant’s acetaminophen), suppositories
• Actifed® A, Actifed® Cold and Sinus, Actifed® Plus
• Alka Seltzer Plus Cold®, AlkaSeltzer Plus Cold and Sinus®
• Allerest® products
• Anacin®, Anacin® – 3®
• Arthritis Foundation® Aspirin Free
• Benadryl® Allergy/Cold tablets
• Capital® with Codeine
• Comtrex® products
• Darvocet®
• Datril Extra®
• Drixoral® products
• Endocet®
• Excedrin® PM, Excedrin Migraine®
• Fioricet®, Fioricet® with Codeine
• Liquiprin®
• Lorcet®, Lortab®
• Midrin®
• Midrol®
• Norco®
• Pamprin®
• Panadol®
• Percocet®
• Percogesic®
• Phenaphen® with Codeine
• Roxicet®
• Sineaid® Sinus medicine
• Sinutab® products
• Sominex® Pain Relief Formula
• St. Joseph’s® Aspirin-Free products
• Sudafed® Sinus products
• Tempra®
• Theraflu® products
• Tylenol Flu®, Tylenol PM®, Tylenol Sinus®, Tylenol Cold®, Tylenol Sore Throat®, Tylenol Allergy®, Women’s Tylenol®
• Tylenol with Codeine #2, 3, and 4
• Tylox®
• Vanquish® products
• Vicodin®
• Wygesic®

Source: Department of Pharmacy Services, Drug Information Service, University of Michigan Hospitals and Health Centers
## Drugs to Avoid

There are many drugs that can interact with anti-rejection drugs. If you are taking cyclosporine, tacrolimus or sirolimus, you should check with the transplant team before taking any new prescription or over-the-counter medications. The following are some examples of drugs with significant interaction potential, however, this list does not include all of them.

<table>
<thead>
<tr>
<th>CLASS</th>
<th>DRUG</th>
<th>COMMON TRADENAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-infective drugs</td>
<td>Clarithromycin</td>
<td>Biaxin®</td>
</tr>
<tr>
<td></td>
<td>Erythromycin</td>
<td>EES, Ery-Tab, E-mycin, ERYC</td>
</tr>
<tr>
<td></td>
<td>Telithromycin</td>
<td>Ketek™</td>
</tr>
<tr>
<td></td>
<td>Amikacin</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Gentamicin</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Tobramycin</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Nafcillin</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Rifabutin</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Rifampin</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Amphotericin B</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Fluconazole</td>
<td>Diflucan®</td>
</tr>
<tr>
<td></td>
<td>Itraconazole</td>
<td>Sporanox®</td>
</tr>
<tr>
<td></td>
<td>Ketoconazole</td>
<td>Nizoral®</td>
</tr>
<tr>
<td></td>
<td>Voriconazole</td>
<td>VFEND®</td>
</tr>
<tr>
<td>Anti-seizure drugs</td>
<td>Carbamazepine</td>
<td>Tegretol®</td>
</tr>
<tr>
<td></td>
<td>Phenobarbital</td>
<td>Luminal®</td>
</tr>
<tr>
<td></td>
<td>Phenytoin</td>
<td>Dilantin®</td>
</tr>
<tr>
<td>Blood pressure lowering drugs</td>
<td>Diltiazem</td>
<td>Cardizem®, Cardizem CD®, Cartia XT®, Dilacor XR®, Dilt-CD®, Dilt-XR®, Diltia XT®, Taztia XT®, Tiazac®</td>
</tr>
<tr>
<td></td>
<td>Verapamil</td>
<td>Calan®, Calan SR®, Covera-HS®, Isoptin®, Isoptin SR®, Verelan®, Verelan PM®</td>
</tr>
<tr>
<td>Pain killers</td>
<td>Non-steroidal anti-inflammatory drugs</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Celecoxib</td>
<td>Celebrex®</td>
</tr>
</tbody>
</table>
# Understanding Your Insurance Coverage — Questions to Ask Your Insurance Representative

Name of Representative ___________________________________________________________________ Date ______________

<table>
<thead>
<tr>
<th>BENEFITS/COVERED SERVICES</th>
<th>YES/NO</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does my plan cover hospital charges?</td>
<td>Yes  No</td>
<td></td>
</tr>
<tr>
<td>Does my plan cover professional charges (also known as doctor fees)?</td>
<td>Yes  No</td>
<td></td>
</tr>
<tr>
<td>Does my plan cover prescription drugs?</td>
<td>Yes  No</td>
<td></td>
</tr>
<tr>
<td>Does my plan cover solid organ transplantation?</td>
<td>Yes  No</td>
<td></td>
</tr>
<tr>
<td>Does my plan have a “pre-existing condition” clause? If yes: How is the clause defined? If yes: Would my illness be considered a pre-existing condition?</td>
<td>Yes  No</td>
<td></td>
</tr>
<tr>
<td>BENEFITS/COVERED SERVICES</td>
<td>YES/NO</td>
<td>NOTES</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------------------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td><strong>For liver and kidney transplant only:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does my plan cover <em>living related</em> solid organ transplant?</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>If yes, does my plan cover the donor medical charges?</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>If yes, are there limits on the coverage for donor medical charges?</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>If yes, what are the limits?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does my plan limit the number of transplants payable in a lifetime?</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>If yes, what is the limit?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If yes, does that limit apply for each organ?</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>Does my plan have a maximum <em>annual</em> amount it will pay out each year?</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>If yes, what is the maximum amount?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does my plan have a maximum <em>lifetime</em> amount it will pay out over a lifetime?</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>If yes, what is the maximum amount?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are there coverage exclusions in my plan?</td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>If so, what are the exclusions?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What period of time applies to the exclusion?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BENEFITS/Covered Services</td>
<td>YES/NO</td>
<td>Notes</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td>Does my plan cover any travel, meals and lodging expenses?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If yes, does it cover for a family member as well as the patient?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If yes, how much does it cover?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Out-Of-Pocket Costs</th>
<th>YES/NO</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does my plan have deductible amounts?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If yes, what are they?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does my plan have copayment amounts?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If yes, what are the amounts?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If yes, what services do they apply to?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a maximum out-of-pocket amount that I would be responsible for each year?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If yes, what is the limit?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Referrals/Authorizations</th>
<th>YES/NO</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does my plan have any restrictions on which medical centers I can use (designated provider network)?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If yes, is the University of Michigan Health System an approved provider?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>REFERRALS/AUTHORIZATIONS</td>
<td>YES/NO</td>
<td>NOTES</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td>Will my plan cover my services at an out-of-network provider?</td>
<td>Yes  No</td>
<td></td>
</tr>
<tr>
<td>If yes, will my out-of-pocket expenses be higher?</td>
<td>Yes  No</td>
<td></td>
</tr>
<tr>
<td>Does my plan utilize a network for managing transplant services?</td>
<td>Yes  No</td>
<td></td>
</tr>
<tr>
<td>If yes, is the UMHS Transplant Center an approved provider?</td>
<td>Yes  No</td>
<td></td>
</tr>
<tr>
<td>Does my plan cover a consultation at one or more transplant centers?</td>
<td>Yes  No</td>
<td></td>
</tr>
<tr>
<td>Is a referral or authorization required for:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consultations?</td>
<td>Yes  No</td>
<td></td>
</tr>
<tr>
<td>Transplant Evaluation/Testing?</td>
<td>Yes  No</td>
<td></td>
</tr>
<tr>
<td>Medical Procedures?</td>
<td>Yes  No</td>
<td></td>
</tr>
<tr>
<td>Who will be my case manager?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How can I contact the case manager?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHARMACY</td>
<td>YES/NO</td>
<td>NOTES</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td>Does my plan cover outpatient prescriptions?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If so, how much are the copays?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are prescriptions available by mail order?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If so, how much are the copays?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there an approved list of covered medications?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Will the plan ever approve use of medications as exceptions to the list?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If yes, how is an exception requested?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Raising Funds to Cover Medical Expenses

If the out-of-pocket costs seem to be more than you would be able to afford, you may wish to consider raising funds to help cover the medical costs. Organizations are available to assist you and your family with fundraising for medical treatments. They often have information designed to help families with the process. The contact information for some of the organizations that work with transplant patients and families is shown below.

- **National Transplant Assistance Fund**
  150 N. Radnor Chester Road, Suite F-120
  Radnor, PA 19087
  (800) 642-8399 toll-free
  www.NTAFund.org

- **Children’s Organ Transplant Association**
  2501 West COTA Drive
  Bloomington, Indiana 47403
  (800) 366-2682 toll-free
  www.cota.org

- **National Foundation for Transplants**
  5350 Poplar Avenue, Suite 430
  Memphis, Tennessee 38119
  (800) 489-3863 toll-free
  www.transplants.org
**Summary of Tests for Liver Transplant Patients**

The charts below provide some basic information about blood and other tests that may be required prior to transplant.

<table>
<thead>
<tr>
<th>LAB TEST</th>
<th>ABBREV.</th>
<th>WHAT THEY ARE USED FOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>White blood count</td>
<td>WBC</td>
<td>Monitors for infection and rejection</td>
</tr>
<tr>
<td>Hemoglobin</td>
<td>HGB</td>
<td>Monitors for blood loss, evaluates for anemia</td>
</tr>
<tr>
<td>Hematocrit</td>
<td>HCT</td>
<td>Monitors for blood loss, evaluates for anemia</td>
</tr>
<tr>
<td>Platelets</td>
<td>PLT</td>
<td>Monitors bleeding tendencies</td>
</tr>
<tr>
<td>Prothrombin Time</td>
<td>PT/INR</td>
<td>Monitors blood clotting (Used in MELD score calculation)</td>
</tr>
<tr>
<td>Glucose (blood sugar)</td>
<td></td>
<td>Monitors pancreas function</td>
</tr>
<tr>
<td>Sodium</td>
<td></td>
<td>Monitors electrolyte balance</td>
</tr>
<tr>
<td>Potassium</td>
<td></td>
<td>Monitors electrolyte balance</td>
</tr>
<tr>
<td>Creatinine</td>
<td></td>
<td>A measure of kidney function (Used in MELD score calculation)</td>
</tr>
<tr>
<td>Albumin</td>
<td></td>
<td>Monitors liver function</td>
</tr>
<tr>
<td>Total Bilirubin</td>
<td>Total Bili</td>
<td>Monitors liver function (Used in MELD score calculation)</td>
</tr>
<tr>
<td>Aspartate Aminotransferase</td>
<td>AST/SGOT</td>
<td>Monitors liver function</td>
</tr>
<tr>
<td>Alkaline Phosphatase</td>
<td>ALK PHOS</td>
<td>Monitors liver function</td>
</tr>
<tr>
<td>Alpha Fetoprotein Tumor Marker</td>
<td>AFP</td>
<td>Aids in detection of liver tumors</td>
</tr>
<tr>
<td>Alanine Aminotransferase</td>
<td>ALT/SGPT</td>
<td>Monitors liver function</td>
</tr>
<tr>
<td>Protein Specific Antigen</td>
<td>PSA</td>
<td>May aid as a marker for prostate cancer</td>
</tr>
</tbody>
</table>
Patients will be given written orders for the tests listed above with instructions for completing the testing through their physicians and dentists. Please fax test results to (734) 763-4574. Occasionally, transplant physicians will require some testing be performed at the University of Michigan Health System. Patients will be advised when that is required.

<table>
<thead>
<tr>
<th>OTHER TESTS</th>
<th>INFORMATION OBTAINED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urine Tests</td>
<td>Screens for infections, renal (kidney) disease and to test for illicit drugs and/or other drug abuse.</td>
</tr>
<tr>
<td>Chest X-ray</td>
<td>Determines the health of the patient’s lungs and lower respiratory tract.</td>
</tr>
<tr>
<td>Liver Ultrasound with Doppler Abdominal CT or MRI/MRV</td>
<td>Examines the patient’s liver and other abdominal organs for the presence of tumors and/or fluid in the abdomen, and to see if the major blood vessels of the liver are open.</td>
</tr>
<tr>
<td>Dobutamine Echocardiogram or 2D Echocardiogram</td>
<td>Provides information to ensure the patient has no heart diseases that may prevent transplantation.</td>
</tr>
<tr>
<td>QFTB or PPD</td>
<td>Provides information regarding the patient’s prior exposure to tuberculosis and whether or not treatment is needed after the patient’s transplant.</td>
</tr>
<tr>
<td>Dental Clearance</td>
<td>Determines the health of the patient’s teeth and gums.</td>
</tr>
<tr>
<td>Mammogram <em>(For female patients over 40 or with a patient/family history of breast cancer)</em></td>
<td>Screens for any breast masses.</td>
</tr>
<tr>
<td>Pelvic Exam with Pap Smear</td>
<td>Screens for cancer of the reproductive organs and/or any sexually transmitted diseases. Patients who have had a hysterectomy do still need a pelvic exam.</td>
</tr>
<tr>
<td>Colonoscopy <em>(For patients over 50 or bleeding)</em></td>
<td>Screens for colon cancer and polyps, evaluates bloody diarrhea and anemia.</td>
</tr>
<tr>
<td>Upper Endoscopy (EGD)</td>
<td>Screens for esophageal varices, ulcers, upper GI bleeding, or other upper GI disorders.</td>
</tr>
</tbody>
</table>
Transplant-Related Web sites

- **University of Michigan Transplant Center**
  www.michigantransplant.org
  The official web site of the University of Michigan Transplant Center geared to provide patients with information regarding the Transplant Center and the transplant process for all solid organ programs.

- **Transweb**
  www.transweb.org
  A non-profit educational web site serving the world transplant community based at the University of Michigan Health System.

- **Scientific Registry of Transplant Recipients (SRTR)**
  www.srtr.org
  The Scientific Registry of Transplant Recipients (SRTR) provides ongoing research to evaluate information and tracks all transplant patients from the time of transplant through discharge, then annually, until graft failure or death.

- **United Network for Organ Sharing (UNOS)**
  www.unos.org
  United Network for Organ Sharing is a non-profit, scientific, and educational organization that administers the Organ Procurement and Transplantation Network (OPTN) collects and maintains its data, and serves the transplant community.

- **Gift of Life**
  www.giftoflifemichigan.org
  Gift of Life (GOL) is the only non-profit full-service organ and tissue recovery agency in Michigan since 1971. As an organization, Gift of Life acts as an intermediary between the donor hospital and the recipient transplant center providing all the services necessary for organ, tissue and eye donation.

- **Transplant Living**
  www.transplantliving.org
  Transplant Living is a web site supported by the United Network for Organ Sharing and is promoted as your prescription for transplant information.
• **Organ Procurement and Transplantation Network (OPTN)**
  [www.optn.transplant.hrsa.gov](http://www.optn.transplant.hrsa.gov)

  The Organ Procurement and Transplantation Network (OPTN) is a unique public-private partnership that is committed to improving the effectiveness of the nation's organ procurement, donation and transplantation system.

• **National Transplant Assistance Fund**
  [www.NTAFund.org](http://www.NTAFund.org)

  The National Transplant Assistance Fund is a tax exempt non-profit organization that assists the transplant community by fundraising, providing grants for eligible transplant candidates, and by exploring matching gift opportunities from corporations or foundations. The National Transplant Assistance Fund (NTAF) supports its activities by assessing a 4% fee for check and cash donations and 7% for credit card donations.

• **Children’s Organ Transplant Association**
  [www.cota.org](http://www.cota.org)

  The Children’s Organ Transplant Association is a tax exempt non-profit organization that assists families of patients under the age of 21, and some older patients with a diagnosis of cystic fibrosis. The organization will work with providers, hotels and airlines to obtain the lowest possible costs for services rendered and may be able to match donated funds to a limit of $10,000. The Children’s Organ Transplant Association does not charge any fees for their services.

• **National Foundation for Transplants**
  [www.transplants.org](http://www.transplants.org)

  The National Foundation for Transplants is a tax exempt non-profit organization that assists patients and their families with fundraising activities when the estimated cost the patient is responsible for (not covered by insurance) is $10,000 or more. The National Foundation for Transplants funds its activities by assessing a 5% fee for all donated dollars.
DURABLE POWER OF ATTORNEY FOR HEALTH CARE

I, ______________________________________________________ (print or type your full name), am of sound mind, and I voluntarily make this designation.

I designate _____________________________________________ (insert name of patient advocate), my _______________________________________________ (spouse, child, friend, etc.), living at ______________________________________________________ (address of patient advocate) as my patient advocate to make care, custody and medical treatment decisions for me in the event I become unable to participate in medical treatment decisions. If my first choice cannot serve, I designate _________________________________________________ (name of successor) living at ______________________________________________________ (address of successor) to serve as patient advocate.

The determination of when I am unable to participate in medical treatment decisions shall be made by my attending physician and another physician or licensed psychologist.

In making decisions for me, my patient advocate shall follow my wishes of which he or she is aware, whether expressed orally, in a living will, or in this designation.

My patient advocate has authority to consent to or refuse treatment on my behalf, to arrange medical services for me, including admission to a hospital or nursing care facility, and to pay for such services with my funds. My patient advocate shall have access to any of my medical records to which I have a right.
Optional

I expressly authorize my patient advocate to make decisions to withhold or withdraw treatment which would allow me to die and I acknowledge such decisions could or would allow my death.

(Sign your name here if you wish to give your patient advocate this authority.)

My specific wishes concerning health care are the following: (if none, write “none”)

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

I may change my mind at any time by communicating in any manner that this designation does not reflect my wishes.

It is my intent that my family, the medical facility, and any doctors, nurses and other medical personnel involved in my care shall have no civil or criminal liability for honoring my wishes as expressed in this designation or for implementing the decisions of my patient advocate.

Photostatic copies of this document, after it is signed and witnessed, shall have the same legal force as the original document.

I sign this document after careful consideration. I understand its meaning and I accept its consequences.

Signed: ____________________________________________ Date: ___________________

Address: ____________________________________________________________________
Notice Regarding Witnesses

You must have two adult witnesses who will not receive your assets when you die (whether you die with or without a will), and who are not your spouse, child, grandchild, brother or sister, an employee of a company through which you have life or health insurance, or an employee at the health care facility where you are a patient.

Statement of Witnesses

We sign below as witnesses. This declaration was signed in our presence. The declarant appears to be of sound mind, and to be making this designation voluntarily, without duress, fraud or undue influence.

Signed by Witness: ___________________________________________________________
Print (or type) Full Name: ____________________________________________________
Address: ___________________________________________________________________
___________________________________________________________________________

Signed by Witness: ___________________________________________________________
Print (or type) Full Name: ____________________________________________________
Address: ___________________________________________________________________
___________________________________________________________________________

Acceptance by Patient Advocate

(A) This designation shall not become effective unless the patient is unable to participate in treatment decisions.

(B) A patient advocate shall not exercise powers concerning the patient’s care, custody and medical treatment that the patient, if the patient were able to participate in the decision, could not have exercised in his or her own behalf.
(C) This designation cannot be used to make a medical treatment decision to withhold or withdraw treatment from a patient who is pregnant that would result in the pregnant patient’s death.

(D) A patient advocate may make a decision to withhold or withdraw treatment which would allow a patient to die only if the patient has expressed in a clear and convincing manner that the patient advocate is authorized to make such a decision, and that the patient acknowledges that such a decision could or would allow the patient’s death.

(E) A patient advocate shall not receive compensation for the performance of his or her authority, rights, and responsibilities, but a patient advocate may be reimbursed for actual and necessary expenses incurred in the performance of his or her authority, rights, and responsibilities.

(F) A patient advocate shall act in accordance with the standards of care applicable to fiduciaries when acting for the patient and shall act consistent with the patient’s best interests. The known desires of the patient expressed or evidenced while the patient is able to participate in medical treatment decisions are presumed to be in the patient’s best interests.

(G) A patient may revoke his or her designation at any time or in any manner sufficient to communicate an intent to revoke.

(H) A patient advocate may revoke his or her acceptance to the designation at any time and in any manner sufficient to communicate an intent to revoke.

(I) A patient admitted to a health facility or agency has the rights enumerated in Section 20201 of the Public Health Code, Act No. 368 of the Public Acts of 1978, being section 333.20201 of the Michigan Compiled Laws.

I understand the above conditions and I accept the designation as patient advocate for

___________________________________________________________ (insert name of patient)

Signed: ______________________________________ Date: ________________
LIVING WILL

I, ______________________________________________________, am of sound mind, and

I voluntarily make this declaration.

If I become terminally ill or permanently unconscious as determined by my doctor and at least
one other doctor, and if I am unable to participate in decisions regarding my medical care, I
intend this declaration to be honored as the expression of my legal right to consent to or refuse
medical treatment.

My desires concerning medical treatment are ______________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

My family, the medical facility, and any doctors, nurses and other medical personnel involved
in my care shall have no civil or criminal liability for following my wishes as expressed in this
declaration.

I may change my mind at any time by communicating in any manner that this declaration
does not reflect my wishes.
Photostatic copies of this document, after it is signed and witnessed, shall have the same legal force as the original document.

I sign this document after careful consideration. I understand its meaning and I accept its consequences.

Signed: ____________________________________________ Date: ___________________
Address: ____________________________________________________________________
___________________________________________________________________________

This declaration was signed in our presence. The declarant appears to be of sound mind, and to be making this declaration voluntarily without duress, fraud or undue influence.

Signed by Witness: ___________________________________________________________
Address: ____________________________________________________________________
___________________________________________________________________________

Signed by Witness: ___________________________________________________________
Address: ____________________________________________________________________
___________________________________________________________________________
**MLabs Blood Drawing Stations**

MLabs offers adult and pediatric blood drawing services through the University of Michigan Health System and Health Centers. Upon arrival, the patient must present a completed MLabs requisition to the receptionist. No appointment is necessary for routine services; please call ahead to schedule glucose tolerance testing. Sites marked with an asterisk (*) are recommended for pediatric patients. Hours are subject to change without notice. Laboratory results are available only through your physician’s office. Please do not contact the specimen collection facility or blood drawing station for test result information.

**Ann Arbor**

**U-M Briarwood Health Center Building 2**  
Briarwood Center for Cardiology & Diabetes  
400 E. Eisenhower, Ste B  
Phone: (734) 998-4413  
Hours: Monday - Friday, 8 a.m. - 4:45 p.m.

**U-M Briarwood Health Center Building 3**  
Briarwood Medical Group  
375 Briarwood Circle  
Phone: (734) 998-0284  
Hours: Monday - Friday, 7 a.m. - 5:45 p.m.  
(Closed first Tuesday of each month, 8 - 10:30 a.m.)

**U-M Briarwood Health Center Building 10**  
Briarwood Family Practice  
1801 Briarwood Circle  
Phone: (734) 913-0167  
Hours: Monday - Friday, 8 a.m. - 4:45 p.m.  
Saturday, 8 - 11:45 am  
(Closed second Wednesday of each month, 8 a.m. - 1 p.m.)

**Other Locations**

**U-M Medical Center Cancer & Geriatrics Center**  
1500 E. Medical Center Dr., Level B2  
Phone: (734) 647-8913  
Hours: Monday - Friday, 7 a.m. - 6 p.m.

**U-M Medical Center Taubman Center**  
1500 E. Medical Center Dr.

**Level 2**  
Phone: (734) 936-6781  
Hours: Monday - Friday, 8:30 a.m. - 3:30 p.m.

**Level 3**  
Phone: (734) 936-6760  
Hours: Monday - Friday, 7 a.m. - 6 p.m.

* Site recommended for pediatric patients.
Other Locations (cont.)

U-M East Ann Arbor Health Center*
4260 Plymouth Rd.
Phone: (734) 647-5685
Hours: Monday - Thursday, 7 a.m. - 7:30 p.m.
      Friday, 7 a.m. - 5:30 p.m.
      Saturday, 8 a.m. - 12:30 p.m.

U-M Brighton Health Center*
8001 Chalits Rd.
Phone: (810) 494-2649
Hours: Monday - Thursday, 7 a.m. - 7 p.m.
      Friday, 7 a.m. - 5:30 p.m.
      Saturday, 8 a.m. - noon

U-M West Ann Arbor Health Center
4900 Jackson Rd., Ste A
Phone: (734) 998-7036, ext. 226
Hours: Monday - Friday, 8 a.m. - 4 p.m.
       (Closed second Wednesday of each month, 8 - 9:30 a.m.)

U-M Canton Health Center*
1051 North Canton Center Rd.
Phone: (734) 844-5280
Hours: Monday - Thursday, 7:30 a.m. - 7:30 p.m.
       Friday, 7:30 a.m. - 5 p.m.
       Saturday, 8 a.m. - noon

* Site recommended for pediatric patients.
Other Locations (cont.)

U-M Chelsea Health Center
14700 E. Old U.S. 12
Phone: (734) 475-4483
Hours: Monday - Friday, 8:15 a.m. - 4:45 p.m.

U-M Ypsilanti Health Center *
200 Arnet St.
Phone: (734) 544-3277
Hours: Monday - Friday, 8 a.m. - 5 p.m.
Saturday, 8 a.m. - noon

U-M Livonia Health Center
20321 Farmington Rd.
Phone: (248) 888-0893, ext. 254
Hours: Monday - Friday, 8:30 a.m. - 4:30 p.m.

Livonia Center for Specialty Care
1990 Haggerty Rd.
Phone: (734) 432-7811 or (800) 649-3777
Hours: Monday - Friday, 7:30 a.m. - 4:30 p.m.

* Site recommended for pediatric patients.