

The Gift Relationship in Process: From Donor to Recipient

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The diary below is a day and a half in my life as an organ donation coordinator at Carolina Donor Services. A nurse for almost 17 years, I have been an organ donation coordinator since June 1998. I recount my experiences with a recent organ donor with the hope that it will help others understand the complex emotional and clinical processes involved with donation.

Sunday

0730: I receive a referral from a local hospital about a 22-year-old female, J., who was admitted with an intracranial hemorrhage secondary to an aneurysm.

0815: I arrive at the hospital and talk with the staff and the physician concerning the history surrounding her admission. I obtain the patient's course of treatment since admission and inquired about the family and how they are coping. The staff informs me that a Cerebral Blood Flow study has been ordered and is scheduled to be performed at 10:00 a.m.

0830-1000: I review the patient's medical chart and recorded medications, blood pressures, heart rate, lab values, any blood products and I.V. fluids given and urine output. I also record any surgical procedures preformed. Then, I call the CDS Medical Director and obtain authorization to follow this patient as a potential organ donor.

1000-1200: The brain death exam has been completed (most hospitals use both clinical and apnea tests). The clinical exam consists of testing for the absence of pupillary response; no blink response when the eye is touched (corneal reflex), no cough or gag reflex and no response to painful stimulus. The apnea test confirms absent respirations, which is a mandatory finding to support brain death. The Cerebral Blood Flow study was used as a confirmatory test for brain death.

1200-1400: With the brain death exam complete, the physician notifies her husband and parents and explains that J. has died. He answers their questions and tells them the time of her death. The physician informs the family that there is someone available to talk with them about decisions they will have to make. *Note: Legally and medically, brain death and cardiac death are the same as far as pronouncement of death.*

1400-1500: The family has informed the nurse they are

ready to speak with me. I find a quiet, private room where I can talk with the family about the opportunity to donate J.'s organs. I answer their questions, which include the steps in the recovery procedure, how long it will take, and whether they can still have an open casket funeral for her. After answering their questions, the family agrees to donation. J.'s husband, her parents, and her husband's parents are there for the conversation. I spend time talking with the family about J. They share with me that she had just been married for one year, that she has a deep religious commitment and that she was always helping other people. J.'s family also shares that she loved the outdoors. While talking with her family, I found it very interesting that they had had a conversation and knew that her wishes were to be an organ donor. The family completed the consent form that would allow for the donation of J.'s heart, lungs, liver, pancreas and kidneys. The family chose not to consent to tissue (e.g. bone, skin) and eye/cornea donation.

1500-1600: Family and friends gather at J.'s bedside to say their goodbyes.

1600-1800: I call the Medical Examiner to see if there will be any restrictions for donation. Depending on the cause of death, the M.E. can restrict certain or all organs for donation if s/he feels it will interfere with an investigation of the circumstances behind the death. In this case, no restrictions have been set, so the donation can move forward. I send blood for serologies, tissue typing (used for placing the kidneys and the pancreas), and values on patient's current organ function. I also begin initiation of standard orders to maintain the patient's organ functions.

1800-2200: I evaluate lab results and make adjustments to I.V. fluids and the ventilator to optimize organ function. Then I call the United Network for Organ Sharing (UNOS) and give them the information on the patient including the patient's height, weight, blood group, age, sex and race. UNOS has all the potential organ recipients listed for the entire country. They will then run a list of recipients that are the same blood group as the patient and close to her height and weight. They will be listed in priority order according to UNOS allocation policies, which vary by organ, with emphasis on placement with local recipients. All of the consults for cardiac and pulmonary function are completed. Next, I start placing organs according to the UNOS list.

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2200-2400: The serology and tissue typing results are reported. With these results, I place all the organs for transplantation during this time except the heart because of J.'s size; she was not a match for recipients at our local transplant centers.

Monday

2400-0200: I place both kidneys with UNOS for perfect matches (a perfect match is based on specific DNA tissue typing). The lungs, liver, and the pancreas are placed for recipients listed in North Carolina. I continue to try to place the heart. I call the operating room (OR) to inform them that we would like to go to the operating room around 0400 depending on who would accept the heart and how far they would be coming to recover. *Note: The coordinator is responsible for arranging pick-up and transport of the arriving recovery/transplant teams.*

0200-0300: I place the heart with a hospital in New York. The recipient is a 50-year-old male who was farther down on the list for transplant, but whose size most closely matches the donor's. I would imagine he is very excited. The heart team states that they can arrange a flight and will land at the airport at approximately 0400. I call the OR and arrange for a room for 0400. I call a local ambulance service to be waiting at the airport for the heart team from New York to land and bring them to the hospital. Then I call one of our CDS preservation coordinators responsible for flushing the organs during the case with the time he will need to be at the hospital.

0300-0500: UNOS calls me back to say the kidneys are accepted for two patients in New York pending the anatomy. I continue with donor management, making changes in I.V. fluids to make sure the organs continue to function optimally. I also find time to work on my paperwork and make copies of the chart, which include an official declaration of time of death, copy of the consent form for donation, and blood type information.

0400-0500: The local transplant teams arrive. We take the patient to the operating room. The heart transplant team from New York arrives. Everyone in the operating room introduces himself or herself to each other.

0425-1030: An incision is made from the top of the sternum to 2-3 inches below the umbilicus. The thoracic surgeons work in the chest cavity and visualize the heart and lungs. This takes 20-30 minutes, after which they will leave the operating room to find a place to rest. The abdominal surgeon will take from 2-3 hours to reach the point of being prepared to recover the organs. If the pancreas is being recovered, it will add 1-2 hrs to the surgical process. Once the abdominal surgeon is ready, the thoracic surgeons will return to the table. The coordinator will then ask the anesthesiologist to draw 120-200cc's of blood from the patient, which will be used by the transplant centers to test with their recipient's blood to make sure there will be no adverse reactions. After the blood is drawn, 30,000 to 40,000 units of heparin are given to thin the blood. Next, cannulas are inserted in the aorta above the heart, the pulmonary arteries, the descending aorta below the kidneys and the portal vein below the liver. These cannulas are then connected to cold bags of preservative solution called "UW." The circulation is then clamped off just above the heart and below the kidneys. The flush solution is then started so

that all the organs that are to be transplanted are cleared of blood and replaced with the cold preservative. Once the flush is complete which takes 15-30 minutes the heart is then removed. The heart takes approximately 5-10 minutes to remove from the body. The heart should be transplanted within 4 hours after being recovered or there may be irreversible cell and organ damage, which is why most out-of-state heart recovery teams will use jet service to reach their destinations.

The lungs are removed next, which again takes 5-10 minutes. Lungs can remain out of the body for approximately 4-6 hours before possible organ damage develops. The thoracic teams will then place the organs in sterile bags surrounded by sterile ice and "UW."

The abdominal surgeon will take another 2-3 hours to recover the liver, pancreas and kidneys. These organs will also be placed in sterile bags, solution and ice. The surgical teams will take the recovered organs back with them to be transplanted. The kidneys that were accepted by New York will have transportation arranged by UNOS. Usually kidneys are transported by commercial airlines. The kidney can remain on ice for 24 hours before there is concern of damage to organ function. The liver should be transplanted within 8-12 hours and the pancreas within 12-16 hours.

1030-1100: The incision is sutured closed; the body is cleaned then taken to the hospital morgue. I call the family to tell them how the recovery went, since that is what they wanted. I also notify the nursing supervisor that the organ recovery is complete. Organ donation will not affect the family's decision to have an open casket or other funeral arrangements. *Note: If the family had consented to eye and tissue donation, this recovery would occur after the organ donation is complete. Tissue donation usually takes from 2-4 hours and eye donation typically takes 30-45 minutes. If the family is going to have an open casket funeral, some types of bone will not be removed. Eye donation does not affect having an open casket funeral. If the patient is a Medical Examiner's case, the M.E. will view the body after all recovery is complete and they will then release the body to the funeral home.*

1130-1230: I thank the hospital staff in the OR and on the inpatient unit for their cooperation, answer their questions, and gather my belongings.

1300: I go to the office to complete paperwork. After the paperwork is completed, I go home to get some sleep.

2-3 weeks after donation: I write a letter to the family informing them of what organs were recovered and transplanted, giving them some general (non-identifying) information about the organ recipients (e.g. their families, work, hobbies) and how well they are doing. With this donor, the heart, lungs, liver, pancreas, and kidneys were transplanted and are functioning well. Hopefully, this information will provide the family with some comfort in their time of grief.

Carolina Donor Services will remain in contact with the donor family for two years or longer, if the family wants to continue a relationship with us. Carolina Donor Services' Life Anew Program invites families to annual Services of Remembrance to honor their loved ones who were donors. The Life Anew Program also facilitates correspondence—and sometimes even face-to-face meetings if both sides request it—between donor families and recipients.