

ARORA

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Arkansas Regional Organ Recovery Agency

MAIN OFFICE

Little Rock:

Arkansas Regional Organ Recovery Agency
1100 North University, Suite 200
Little Rock, AR 72207

800-727-6726 Referral line

501-907-9150 Main Office
501-372-6279 Fax line 1
501-907-0077 Fax line 2

SATELLITE OFFICE

Fayetteville:

Arkansas Regional Organ Recovery Agency
2863 Old Missouri Road, Suite 112D
Fayetteville, AR 72703

800-727-6726 Referral line

479-442-2041 Main Office
479-442-0047 Fax line

Arkansas Regional Organ Recovery Agency (ARORA) - www.arora.org

Table of Contents

Tab 1 - Introduction

- 1.1 Forward
- 1.2 Mission Statement
- 1.3 Organizational Chart
- 1.4 HRSA Organ Donation Breakthrough Collaborative
- 1.5 Donor Family Aftercare Program

Tab 2 - Organ Donation Information

- 2.1 CMS Conditions of Participation
- 2.2 Routine Referral Process
- 2.3 Laboratory Tests and Consultations
- 2.4 Academy of Neurology Practice Parameters and Brain Death Guidelines
- 2.5 Consent Process and DMV Certification
- 2.6 Organ Donor Management
- 2.7 Organ Recovery Process
- 2.8 Surgical Supply List
- 2.9 Anesthesia Suggestions
- 2.10 Donation After Cardiac Death (DCD)

Tab 3 - Tissue Donation Information

- 3.1 Routine Referral Process
- 3.2 Designated Requestor
- 3.3 Guide for Referring All Deaths

Tab 4 - Eye Donation Information

- 4.1 Guidelines from the Arkansas Eye Bank and Laboratory
- 4.2 Eye Bank Mission Statement

Tab 5 – Policy and Law

- 5.1 Revised Uniform Anatomical Gift Act
- 5.2 Legislation
- 5.3 Memorandum of Agreement
- 5.4 Credentialing of Visiting Teams / Joint Commission Response
- 5.5 Reimbursement Policy
- 5.6 Hospital Policy (*add hospital policy here*)

Tab 6 – Helpful Information

- 6.1 Religious Views Concerning Organ and Tissue Donation
- 6.2 FAQ Regarding Donation
- 6.3 Transplantation Today
- 6.4 Glossary of Terms

Only **1** percent of the population
will die under circumstances
that allow organ donation



One donor can potentially donate **8** organs



0 lives will be saved if you do nothing

FOREWORD

The Arkansas Regional Organ Recovery Agency or ARORA is an Organ Procurement Organization (OPO) founded in 1987. As one of 58 OPOs in the United States, we work to provide organs for life-saving transplants and to insure the opportunity to make donors wishes a reality.

Transplantation is one of the most remarkable success stories in the history of medicine. Advances in drug therapy, surgical procedures and technology have made transplantation a safe, medical alternative to end stage organ failure. Despite all the advances, the need for organs and tissue far exceeds the number available for transplantation. It is estimated no more than half of organs that could be transplanted are actually being recovered.

In an effort to reduce deaths on the waiting list, Secretary of Health Tommy Thompson and the Department of Health and Human Services launched an all encompassing Collaborative Breakthrough on Organ Donation in April of 2003 to change the course of donation throughout the country. (see *Department of Health and Human Services page*)

ARORA is dedicated to incorporating known **Best Practices** and proven methodologies into our agency and hospitals in Arkansas to increase the numbers of available organs. The following standards are designed to improve donation rates throughout all hospitals with organ donor potential:

- ! Create OPO presence in the hospital with an In-House Coordinator
- ! Analyze and apply current hospital specific data
- ! Identify Physician and Clinical Champions
- ! Conduct real time Death Record Reviews
- ! Establish Clinical Triggers for Early Referral
- ! Hold Donation Team Huddles previous to family approach
- ! Identify and utilize Effective Requestors in every case
- ! Conduct After Action Reviews

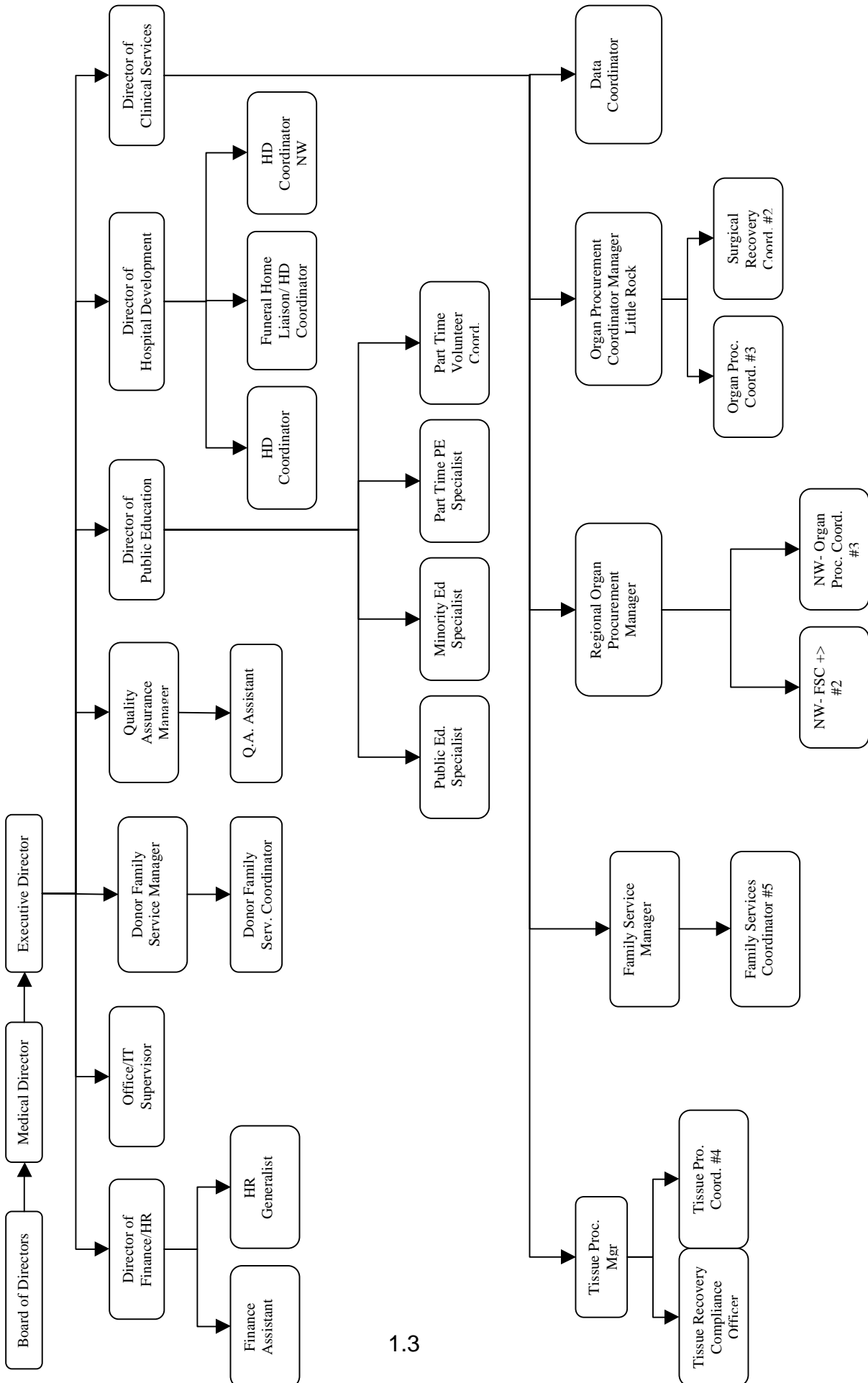
This manual is designed as a tool for administration and medical staff to answer questions relating to referral, evaluation and testing, consent and authorization, donor management, organ recovery and allocation, tissue recovery, donor family aftercare, state law and federal regulations. However, we are always available to speak with you in person regarding any issues relating to organ and tissue donation and education.

We look forward to working with you as part of the healthcare team to honor donor's wishes and save the lives of those who wait.

ARORA's Mission Statement

The staff of the Arkansas Regional Organ Recovery Agency will make every effort to provide organs and tissues for life-saving and life-enhancing transplantation. This will be accomplished through hospital training, and through community involvement by providing public education. The staff will strive to be ethical and professional thus, providing care, dignity, honor and respect to all families, donors and recipient.

ARORA Organizational Chart with No Employee Names
Revised 4/11/08



+ Family service Counselor
 ** Family Service Coordinator
 > Directly Reports to FSC Mgr & indirectly to NW- Reg. Organ Proc. Mgr

Department of Health and Human Services Organ Donation Breakthrough Collaborative

From Best Practices to Common Practice

Purpose

The Department of Health and Human Services joined with key national leaders and practitioners from the Nation's transplantation and hospital communities in April 2003 to launch the Organ Donation Breakthrough Collaborative. The Collaborative is intended to dramatically increase access to transplantable organs. The purpose of this initiative is clear, measurable, ambitious, and achievable:

Committed to saving or enhancing thousands of lives a year by spreading known best practices to the Nation's largest hospitals to achieve organ donation rates of 75 percent or higher in these hospitals.

The Problem

More than 98,000 people in the Nation are currently waiting for an organ transplant. The United States is far from maximizing its supply of available organs from deceased donors. In 2002, only 6,617 (about 46 percent) of an estimated 14,000 potential donors donated organs. As a result, an average of 17 people on the transplantation waiting list die each day.

The Opportunity

Fifty percent of the Nation's eligible organ donors are in 200 hospitals. Fourteen of the largest hospitals in the United States have already achieved organ donation rates of 75 percent or greater. Many other large hospitals, clustered in certain donation service areas, also have average donation rates that are well above the national average of 46 percent. Rates in the largest hospitals vary from 0 percent to 100 percent.

The high rates are no accident. The practices used by organ procurement organizations (OPOs) and large hospitals to generate these high rates can be replicated. Put simply, there is a gap between what we know generates these high rates and the performance of the current organ donation system. The Organ Donation Breakthrough Collaborative will help OPOs and their chosen large hospitals to close that gap rapidly. Participating teams can expect to achieve significantly higher organ donation rates.

Achieving the Collaborative's purpose of an average donation rate of 75 percent in the Nation's 200 largest hospitals could save or enhance thousands more lives each year.

Expectations

OPOs and large hospitals sent multidisciplinary teams to participate in an intensive series of Collaborative Learning Sessions and Action Periods that took place from September 2003 to May 2005. Drawing from the experience of practitioners with high donation rates, these teams worked together over 8 months to rapidly learn, adapt, redesign, implement, track, and refine their organ donation processes to achieve donation rates of 75 percent or higher.

Leadership

An expert panel, composed of individuals experienced in successful organ procurement system design and operations, lead the Collaborative. The panel's work was guided by experts from the Institute for Healthcare Improvement and Quality Reality Checks, Inc., world-class quality improvement organizations, and experts with a proven track record of conducting collaboratives that generate results of this magnitude.

Leading organizations who provided input and support into the development of the Collaborative include the Association of Organ Procurement Organizations, the American Hospital Association, the North American Transplant Coordinators Organization, the United Network for Organ Sharing, the Coalition on Donation, the University Renal Research and Education Association, the National Kidney Foundation, the Centers for Medicare & Medicaid Services, the American Society for Minority Health and Transplant Professionals, and others. The Health Resources and Services Administration managed the initiative.

Donor Family Aftercare Program

Many OPOs have created programs to provide support services to donor families after donation. ARORA's Aftercare program is designed to provide support services, guidance and an outlet for expression for all donor families who, after donation, want to participate in the program.

A donor family's participation in ARORA's Aftercare Program is strictly voluntary. After a family consents to donation, services are offered from the Aftercare program. Regardless of whether organs are transplanted, families are still offered the opportunity to participate in the program.

Usually, within 45 days of donation, the donor family is sent a letter from an ARORA Family Services Coordinator or Procurement Coordinator with general information regarding their loved one's transplant recipients.

Also included in this mailing is a questionnaire from the Aftercare Program designed to assess each family's needs. Would they like:

- 1) information regarding ARORA's Aftercare program;
- 2) to receive correspondence from any recipients;
- 3) to be removed from ARORA's mailing list;
- 4) information regarding support groups in their area;
- 5) to be contacted by a donor family volunteer;
- 6) to volunteer with ARORA. Volunteer opportunities include activities such as Public Education events and participating with the AR Donor Family Council.

This questionnaire helps the Aftercare staff offer specific services to a donor family to best serve their needs.

A Bereavement packet containing reading material is sent to all families who request information. Families receive mailings throughout the year to keep them informed of various donor awareness events and events to honor their loved one.

The Aftercare program is also responsible for facilitating correspondence between donor families and recipients. Strict guidelines are followed in the release of information process.

- a. A recipient interested in corresponding with a donor family, sends letters to ARORA, including name, and transplant date on a separate piece of paper for identification purposes for the Donor Family Services Coordinator.

- b. The letter is forwarded to the donor family after all identifying information is removed, and
- c. If the donor family wishes to respond, their letter is sent to ARORA, forwarded to the transplant center and finally to the recipient.

Correspondence is handled in this manner for confidentiality purposes. If a recipient and a donor family wish to correspond directly or meet face to face, a "Release and Consent" form can be signed by both parties and contact information can be released.

ARORA's Aftercare program facilitates first time meeting with donor families and recipients, at their request.

ARORA'S Aftercare program also conducts support/bereavement group meetings for donor families at various locations throughout the state.

For more information on events to honor AR donors, donation awareness events, AR Donor Family Council, Transplant Games or support group meetings, please contact Donor Family Services at ARORA.



®

**CENTERS FOR MEDICARE & MEDICAID SERVICES (CMS)
AND
CONDITIONS OF PARTICIPATION (CoP) REGULATIONS
DESIGNATED REQUESTORS**

**Center for Medicare & Medicaid Services Issues
Conditions of Participation for Hospital**

All hospitals that receive Medicare funding were faced with developing protocols and implementing practices to comply with the Conditions of Participation that changed on August 21, 1998. The intent of this regulation is to increase the number of available organs, tissues and eyes for transplantation.

The goals outlined by the regulation are interpreted by the Office of Inspector General's report which are: 1) increase consent to donation; 2) maximize donation opportunities; and 3) learn more about what works to increase donation through research efforts.

The critical piece in making these provisions work is collaboration and cooperation between hospitals and Organ Procurement Organizations (OPOs) in identifying and managing potential donors and in obtaining consent from donor families. Hospitals must refer and manage donors; OPOs must train hospital staff on how to identify and manage potential donors , and how to request consent.

The regulation encourages the use of best practices, based on research that indicates that consent to organ donation is highest when OPO and hospital staff make the formal request together. (Office of Inspector General Report August, 2000)

The conditions set forth the following provisions regarding organ, tissue and eye donation:

- ! Each hospital must have an **agreement with an OPO** designated by the secretary of HCFA. The hospital must also have an agreement with at least one tissue bank, and at least one eye bank to cooperate in the retrieval, processing, preservation, storage and distribution of tissues and eyes.
- ! The hospital's agreement with the OPO requires the hospital to **notify the OPO** or third party designated by the OPO in a timely manner about **all deaths and imminent deaths** that occur in the hospital. The rule is intended to ensure that the family of every potential donor is informed of the option to donate organs, tissues and eyes.

Imminent death is defined as a severely brain-injured, ventilator-dependent patient, with either: clinical findings consistent with a Glasgow Coma Score (GCS) of less than or equal to 5, or a plan to discontinue mechanical/pharmacological support.

- ! The regulation allows the OPO to **determine medical suitability** for organ donation.
- ! The hospital must collaborate with the OPO in assuring that the next-of-kin of each potential donor is informed of **donation options**.
- ! Hospitals will determine who makes the **request for donation**, however, if requestors are not OPO employees, those **designated requestors** (see page 3) must be trained by the OPO. The OPO must work with the hospital in education staff on donation issues.
- ! The request process must encourage **discretion and sensitivity** toward families of potential donors.
- ! The hospital must work cooperatively with the procurement agencies in **reviewing death records and maintaining potential donors**.

To assist hospitals in meeting these regulations, ARORA is committed to providing the following services:

- ! Provide programs for the hospital staff to educate those individuals who are interested in becoming trained requestors.
- ! Conduct one-on-one meetings to alert staff of the regulation's impact and how we can collaborate to help them achieve compliance.
- ! Develop a system for notification of all death and imminent deaths.
- ! Provide hospitals with compliance reports with referrals of all deaths and donation rates.
- ! Collaborate with all hospitals in developing a quality improvement program for compliance with regulations.

Federal Register. (1998, June 22) – Medicare and Medicaid Programs; Hospital Conditions of Participation; Identification of Potential Organ, Tissue, and Eye Donors and Transplant Hospitals' Provision of Transplant Related-Data. Health Care Financing Administration [HCFA] DHHS, 63 (119). 42 CFR Part 482, pages 33856-33875.

ROUTINE NOTIFICATION PROCESS

800-727-6726

The Centers for Medicare and Medicaid Services (CMS) reimburse hospitals for patient services and in return, require compliance with health regulations. The CMS regulations relating to Organ donation, issued in 1998, are called the CMS Conditions of Participation (CoP).

One of the CoPs requires all deaths and imminent deaths in the hospital be routinely referred to the OPO. The Referral phone call from the hospital unit where the death occurred should be made within an hour of the patient's death.

In the case of imminent death, the Referral phone call should be made within an hour of the patient meeting **referral triggers**. Referral triggers are criteria agreed upon by the hospital and OPO for early referral of brain injured patients. Hospital policy will define referral triggers within the institution, with most hospitals adopting national standards. The CMS recommended referral triggers for early referral are:

- ! Neurological insult or injury
- ! Mechanical ventilator support
- ! Glasgow coma score of ≤ 5
- ! Plan to withdraw mechanical or pharmacological support

The Joint Commission also requires hospitals monitor their Routine Notification Rate and Timely Notification Rate to the OPO and initiate action plans for 100% compliance when necessary. ARORA provides monthly Referral Reports and Dashboards as a service to the hospital for compliance purposes.

A second CoP states the OPO will determine medical eligibility for donation. ARORA contracts with a Referral Service who is available 24 hours a day, 7 days a week. The Referral Service operator gathers all pertinent information about the deceased patient or the patient meeting clinical triggers to allow ARORA to make a determination of medical eligibility for donation. This information includes, but is not limited to the following: (*see Guidelines for Referring Deaths*)

- Name, Age, Sex, Race
- Height and Weight
- Admitting diagnosis and Cause of Death
- Abnormal lab results
- Known previous medical/social history
- WBC/ cultures/temp trends
- Fluid & blood volumes administered
- Antibiotic therapy information

Families of potential organ donors will be approached in person by ARORA staff. Families of potential tissue/eye donors will be approached over the telephone by ARORA staff, Call Center staff or persons trained by ARORA.

Discussing donation with a family prior to the Referral phone call to determine eligibility or by someone not trained and designated by ARORA is considered an **APR**, Approach Prior to Referral, and is negatively reflected on the monthly Referral Report and Dashboard.

Laboratory Tests and Consultations

Information requested by the Organ Procurement Coordinator at the time of referral may include the following:

Name, age, sex	BUN
Attending physician	Serum creatinine
Availability of family	Hourly urine output
Blood type	Current vital signs
Diagnosis	Temperature
Admission date & time	
Brief patient history	

Also helpful at the time of referral, if available:

Culture reports	Electrolytes
HBsAg, HBcAb	WBC's
HIV	VDRL
ABG's	
Medications (i.e., vasopressors)	

After an initial assessment, the following may also be requested:

- Urine culture & sensitivity (drawn directly from the foley)
- Blood cultures x2
- Recent chest x-ray
- Measured weight

Additional studies are necessary for specific organ function. They include the following:

Liver Donation

- AST, ALT, GGT, LDH
- Total & Direct Bilirubin
- PT, PTT, Platelet count

Lung Donation

- Bronchoscopy
- O2 Challenge
- Sputum Culture

Pancreas Donation

- Glucose
- Amylase
- Lipase

Heart Donation

- Cardiac isoenzymes
- Cardiac consultation
- 12-lead EKG
- Echocardiogram
- Cardiac catheterization may be requested, depending on the donors age and medial history

Kidney Donation

- BUN
- Creatinine
- Electrolytes



PRACTICE PARAMETERS:
DETERMINING BRAIN DEATH IN ADULTS

(Summary Statement)

Report of the Quality Standards Subcommittee of the American Academy of Neurology

Overview.

Brain death is defined as the irreversible loss of function of the brain, including the brainstem. Brain death from primary neurologic disease usually is caused by severe head injury or aneurysmal subarachnoid hemorrhage. In medical and surgical intensive care units, however, hypoxic-ischemic brain insults and fulminant hepatic failure may result in irreversible loss of brain function. In large referral hospitals, neurologists make the diagnosis of brain death 25 to 30 times a year.

Justification.

Brain death was selected as a topic for practice parameters because of the need for standardization of the neurologic examination criteria for the diagnosis of brain death. Currently, there are differences in clinical practice in performing the apnea test and controversies over appropriate confirmatory laboratory tests. This document outlines the clinical criteria for brain death and the procedures of testing in patients older than 18 years.

Description of the process.

All literature pertaining to brain death identified by MEDLINE for the years 1976 to 1994 was reviewed. The key words "brain death" and "apnea test" (subheading, "adult") were used. Peer-reviewed articles with original work were selected. Current textbooks of neurology, medicine, pulmonology, intensive care, and anesthesia were reviewed for opinion. On the basis of this review and expert opinion, recommendations are presented as standards, guidelines, or options. *The recommendations in this document are guidelines unless otherwise specified (see Definitions).*

I. Diagnostic criteria for clinical diagnosis of brain death

- A. Prerequisites. Brain death is the absence of clinical brain function when the proximate cause is known and demonstrably irreversible.
 - 1. Clinical or neuroimaging evidence of an acute CNS catastrophe that is compatible with the clinical diagnosis of brain death
 - 2. Exclusion of complicating medical conditions that may confound clinical assessment (no severe electrolyte, acid-base, or endocrine disturbance)
 - 3. No drug intoxication or poisoning
 - 4. Core temperature $\geq 32^{\circ}\text{C}$ (90°F)
- B. The three cardinal findings in brain death are coma or unresponsiveness, absence of brainstem reflexes, and apnea.
 - 1. Coma or unresponsiveness--no cerebral motor response to pain in all extremities (nail-bed pressure and supraorbital pressure)
 - 2. Absence of brainstem reflexes
 - a) Pupils
 - i. No response to bright light
 - ii. Size: midposition (4 mm) to dilated (9 mm)
 - b) Ocular movement
 - i. No oculoccephalic reflex (testing only when no fracture or instability of the cervical spine is apparent)
 - ii. No deviation of the eyes to irrigation in each ear with 50 ml of cold water (allow 1 minute after injection and at least 5 minutes between testing on each side)

- c) Facial sensation and facial motor response
 - i. No corneal reflex to touch with a throat swab
 - ii. No jaw reflex
 - iii. No grimacing to deep pressure on nail bed, supraorbital ridge, or temporomandibular joint
 - d) Pharyngeal and tracheal reflexes
 - i. No response after stimulation of the posterior pharynx with tongue blade
 - ii. No cough response to bronchial suctioning
3. Apnea--testing performed as follows:
- a) Prerequisites
 - i. Core temperature $\geq 36.5^{\circ}\text{C}$ or 97°F
 - ii. Systolic blood pressure ≥ 90 mm Hg
 - iii. Euvolemia. *Option:* positive fluid balance in the previous 6 hours
 - iv. Normal PCO_2 . *Option:* arterial $\text{PCO}_2 \geq 40$ mm Hg
 - v. Normal PO_2 . *Option:* preoxygenation to obtain arterial $\text{PO}_2 \geq 200$ mm Hg
 - b) Connect a pulse oximeter and disconnect the ventilator.
 - c) Deliver 100% O_2 , 6 l/min, into the trachea. *Option:* place a cannula at the level of the carina.
 - d) Look closely for respiratory movements (abdominal or chest excursions that produce adequate tidal volumes).
 - e) Measure arterial PO_2 , PCO_2 , and pH after approximately 8 minutes and reconnect the ventilator.
 - f) If respiratory movements are absent and arterial PCO_2 is ≥ 60 mm Hg (*option:* 20 mm Hg increase in PCO_2 over a baseline normal PCO_2), the apnea test result is positive (ie, it supports the diagnosis of brain death).
 - g) If respiratory movements are observed, the apnea test result is negative (ie, it does not support the clinical diagnosis of brain death), and the test should be repeated.
 - h) Connect the ventilator if, during testing, the systolic blood pressure becomes ≤ 90 mm Hg or the pulse oximeter indicates significant oxygen desaturation and cardiac arrhythmias are present; immediately draw an arterial blood sample and analyze arterial blood gas. If PCO_2 is ≥ 60 mm Hg or PCO_2 increase is ≥ 20 mm Hg over baseline normal PCO_2 , the apnea test result is positive (it supports the clinical diagnosis of brain death); if PCO_2 is < 60 mm Hg or PCO_2 increase is < 20 mm Hg over baseline normal PCO_2 , the result is indeterminate, and an additional confirmatory test can be considered.

II. Pitfalls in the diagnosis of brain death

The following conditions may interfere with the clinical diagnosis of brain death, so that the diagnosis cannot be made with certainty on clinical grounds alone. Confirmatory tests are recommended.

- A. Severe facial trauma
- B. Preexisting pupillary abnormalities
- C. Toxic levels of any sedative drugs, aminoglycosides, tricyclic antidepressants, anticholinergics, antiepileptic drugs, chemotherapeutic agents, or neuromuscular blocking agents
- D. Sleep apnea or severe pulmonary disease resulting in chronic retention of CO_2

III. Clinical observations compatible with the diagnosis of brain death

These manifestations are occasionally seen and should not be misinterpreted as evidence for brainstem function.

- A. Spontaneous movements of limbs other than pathologic flexion or extension response
- B. Respiratory-like movements (shoulder elevation and adduction, back arching, intercostal expansion without significant tidal volumes)
- C. Sweating, blushing, tachycardia
- D. Normal blood pressure without pharmacologic support or sudden increases in blood pressure
- E. Absence of diabetes insipidus
- F. Deep tendon reflexes; superficial abdominal reflexes; triple flexion response
- G. Babinski reflex

IV. Confirmatory laboratory tests (*Options*)

Brain death is a clinical diagnosis. A repeat clinical evaluation 6 hours later is recommended, but this interval is arbitrary. A confirmatory test is not mandatory but is desirable in patients in whom specific components of clinical testing cannot be reliably performed or evaluated. It should be emphasized that any of the suggested confirmatory tests may produce similar results in patients with catastrophic brain damage who do not (yet) fulfill the clinical criteria of brain death. The following confirmatory test findings are listed in the order of the most sensitive test first. Consensus criteria are identified by individual tests.

- A. Conventional angiography. No intracerebral filling at the level of the carotid bifurcation or circle of Willis. The external carotid circulation is patent, and filling of the superior longitudinal sinus may be delayed.
- B. Electroencephalography. No electrical activity during at least 30 minutes of recording that adheres to the minimal technical criteria for EEG recording in suspected brain death as adopted by the American Electroencephalographic Society, including 16-channel EEG instruments.
- C. Transcranial Doppler ultrasonography
 1. Ten percent of patients may not have temporal insonation windows. Therefore, the initial absence of Doppler signals cannot be interpreted as consistent with brain death.
 2. Small systolic peaks in early systole without diastolic flow or reverberating flow, indicating very high vascular resistance associated with greatly increased intracranial pressure.
- D. Technetium-99m hexamethylpropyleneamineoxime brain scan. No uptake of isotope in brain parenchyma ("hollow skull phenomenon").
- E. Somatosensory evoked potentials. Bilateral absence of N20-P22 response with median nerve stimulation. The recordings should adhere to the minimal technical criteria for somatosensory evoked potential recording in suspected brain death as adopted by the American Electroencephalographic Society.

V. Medical record documentation (*Standard*)

- A. Etiology and irreversibility of condition
- B. Absence of brainstem reflexes
- C. Absence of motor response to pain
- D. Absence of respiration with $\text{PCO}_2 \geq 60$ mm Hg
- E. Justification for confirmatory test and result of confirmatory test
- F. Repeat neurologic examination. *Option:* the interval is arbitrary, but a 6-hour period is reasonable.

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Quality Standards Subcommittee: Jay H. Rosenberg, MD (Chair); Milton Alter, MD, Ph.D.; Thomas N. Byrne, MD; Jasper R. Daube, MD; Gary Franklin, MD, MPH; Benjamin Frishberg, MD; Michael L. Goldstein, MD; Michael K. Greenberg, MD; Douglas J. Lanska, MD; Shrikant Mishra, MD, MBA; Germaine L. Odenheimer, MD; George Paulson, MD; Richard A. Pearl, MD; and James Stevens, MD.

Note.

This statement is provided as an educational service of the American Academy of Neurology. It is based on an assessment of current scientific and clinical information. It is not intended to include all possible proper methods of care for a particular neurologic problem or all legitimate criteria for choosing to use a specific procedure. Neither is it intended to exclude any reasonable alternative methods. The AAN recognizes that specific decisions on patient care are the prerogative of the patient and the physician caring for the patient and are based on all the circumstances involved. Regardless of the conclusions of this statement, the Quality Standards Subcommittee of the AAN recognizes the need to comply with state law.

Reviewers of these practice parameters

Medical societies invited to comment on these practice parameters: The American Academy of Family Physicians (which provided comment), The American Association of Neurological Surgeons, and The American Academy of Pediatrics.

Definitions for classification of evidence

Class I.

Evidence provided by one or more well-designed, randomized, controlled clinical trials.

Class II.

Evidence provided by one or more well-designed clinical studies such as case-control and cohort studies.

Class III.

Evidence provided by expert opinion, nonrandomized historical controls, or one or more case reports.

Definitions for strength of recommendations

Standards.

Generally accepted principles for patient management that reflect a high degree of clinical certainty (ie, based on class I evidence or, when circumstances preclude randomized clinical trials, overwhelming evidence from class II studies that directly addresses the question at hand or from decision analysis that directly addresses all the issues).

Guidelines.

Recommendations for patient management that may identify a particular strategy or range of management strategies and that reflect moderate clinical certainty (ie, based on class II evidence that directly addresses the issue, decision analysis that directly addresses the issue, or strong consensus of class III evidence).

Practice options or advisories.

Strategies for patient management for which clinical certainty is lacking (ie, based on inconclusive or conflicting evidence or opinion).

Practice parameters.

Results, in the form of one or more specific recommendations, from a scientifically based analysis of a specific clinical problem.

Reference

1. The background paper by Eelco F. M. Wijdicks, MD is available upon request at the American Academy of Neurology office.

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Address correspondence and reprint requests to Quality Standards Subcommittee, American Academy of Neurology, 1080 Montreal Avenue, St. Paul, MN, 55116 or customer service at 1-800-879-1960.

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BRAIN DEATH

Brain death is defined as the irreversible cessation of all function of the entire brain, including the brainstem. Brain dead patients have a heartbeat and are maintained on a ventilator, often with inotropic support.

The determination of brain death must be made by the physician for solid organ donation to occur. The physician makes the evaluation of established neurological criteria in the diagnosis of brain death in accordance with accepted medical standards. A known cause of insult or injury is required to pronounce brain death.

1. Common modes of injury that can lead to brain death include:
 - ! Acute neurological trauma
 - ! Intracranial hemorrhage or stroke
 - ! Gunshot wound to the head
 - ! Primary brain tumors
 - ! Drug overdose
 - ! Anoxic brain injury (drowning, post-code, hanging)

2. Stages of herniation (signs of each stage)

Pre-herniation

- Increased heart rate and widening pulse pressure
- Increased blood pressure
- Increased body temperature
- Steadily increasing intracranial pressure
- Loss of remaining neurological functions (brain stem reflexes)

During herniation

- May have sudden fall in blood pressure
- Arrhythmias may occur
- Intracranial pressure may fall or stay unchanged
- Potential for cardiac arrest exists
- Reflex bradycardia

Post-herniation

- Persistent hypotension related to loss of vascular tone
- Tachycardia
- Decrease in body temperature
- Diabetes insipidus
- Loss of auto-regulation centers

Imminent Death

Imminent death* is defined as a severely brain injured, ventilator dependent patient, with either: clinical findings consistent with a Glasgow Coma Score (GCS) of less than or equal to 5, or a plan to discontinue mechanical/pharmacological support.

*Imminent death is defined to provide an understanding of the HealthCare Financing Administration (HCFA) Conditions of Participation, which requires all patients who are brain dead, or those in whom brain death is imminent are referred to the organ procurement organization (OPO) as a potential organ donor.

Guidelines for Establishing Brain Death

Guidelines are established to determine that all brain and brainstem functions are absent.

It is recommended that pediatric patients under the age of one year have a cerebral blood flow study for confirmation of death. There are no guidelines for pronouncement of brain death in neonates under the age of seven days.

1. Clinical Observations

Deep coma of established irreversible etiology

Absence of hypothermia (temp $>90^{\circ}$ F – prefer $>95^{\circ}$ F)

Absence of profound shock or hypotension (SBP ≥ 80 mmHg)

Absence of CNS depressant, drug intoxication, metabolic imbalance or neuromuscular blockade*

***toxicology results, barbiturate and pentobarb levels should be recorded**

Absence of spontaneous movements or posturing

(Peripheral nervous system & spinal cord reflexes may persist)

Absence of purposeful response to deep painful stimuli

(Peripheral nervous system & spinal cord reflexes may persist)

Absence of brain stem reflexes

Pupillary reflex

Oculocephalic reflex (Doll's eye)

Oculovestibular reflex (Cold calorics)

Corneal reflex

Gag reflex

Cough reflex

Respiratory (apnea) reflex

2. Confirmatory Tests

EEG

Cerebral blood flow studies

Brain Stem Reflexes and Apnea Reflex

! Pupillary reflex: A strong source of light is directed to each pupil sequentially and a change in pupil size is observed. Reaction of pupil excludes brain death.

! Oculocephalic reflex (Doll's eye): The patient's head is moved suddenly from side to side. Movement of the eyes within the orbit excludes brain death.

! Oculovestibular reflex (Cold calorics): The head is elevated to 30 degrees and ice water irrigated in each ear sequentially and movement of the eyes toward the irrigated ear is observed. Movement of the eyes excludes brain death.

! Corneal reflex: Each cornea is touched lightly with cotton. Movement of the eyelid excludes brain death.

! Gag reflex: The back of the pharynx is touched with a tongue depressor or the endotracheal tube is moved. Movement of the uvula or retching excludes brain death.

! Cough reflex: A suction catheter is passed through the endotracheal tube into the tracheobronchial tree. Coughing excludes brain death.

! Apnea Testing:

- Obtain baseline PCO₂ of 40 mmHg
- Ventilate with 100% O₂ for 10 minutes
- Disconnect ventilator and provide passive O₂ for 10 minutes (passive O₂ – 6L/min per cannula down endotracheal tube)
- Observe for absence of respiratory effort
- Discontinue apnea test if any respiratory effort or cardiovascular instability ensues
- Obtain arterial blood gases after 10 minutes. The PCO₂ should be >60mmHG to establish apnea.
- Place the patient back on the previous ventilator settings

The Academy of Neurology Practice Parameters: Guidelines for Determining Brain Death in Adults has been included in this manual as a reference.

Reference: Oro, John (1989 September). Determination of Death by Neurological Criteria. Missouri Medicine, 86 (9), 628-631.

Pronouncement of Death

Brain death diagnosis requires a physician's clinical determination.

The physician who pronounces brain death **cannot** be involved in the procurement of organs, according to the Uniform Anatomical Gift Act of 1969.

After the criteria for brain death has been met, a death note should be written by the physician including the following:

Pronouncement of death – stating the patient is dead, brain dead or meets brain death criteria and documentation of the clinical exam and confirmatory tests.

Date and Time of death

Signature of the physician pronouncing brain death

Spinal Reflexes

Spinal reflex is defined as a reflex whose center is in the spinal cord. They are created by simple reflex arcs in which the impulse is not sent to the brain for processing. There are several reflexes that are often seen in brain dead patients.

Babinski reflex: when the bottom of the foot is stroked upward and inward toward the big toe, the great toe flexes downward and the remaining toes fan out.

Triple flexion reflex: when the foot is stimulated, the leg flexes upward at the ankle, the knee flexes and the hip flexes, all simultaneously.

Lazarus response: raising of the arms and crossing them in front of the chest or neck.

Neck-abdominal reflex: abdominal muscles contract and the neck passively flexes

Other reflexes include shoulder shrugs or turning the head to the side in response to stimulus, and a movement of the body in which the head and heels are bent backward and the body is bowed forward in a form of spasm.

Criteria accept that spinal reflex activity is compatible with the diagnosis of brain death.

Consent Process

The consent process begins with routine referral. ARORA will determine medical suitability for organ and tissue donation as well as determining the patient's status in the donor registry.

When the potential for **organ donation** exists in the hospital, a Family Services Coordinator, a specialist from ARORA, conducts an on-site evaluation of the patient's chart and visualization of the body. Consultation between the Family Services Coordinator and the hospital staff is made to determine the recommended plan of care for the patient and family.

After the physician has determined and documented brain death and informed the family of the time of death, the Family Services Coordinator meets with family members to either request consent for donation or inform the family of the patient's decision to be an organ donor.

Under the revised State of Arkansas Uniform Anatomical Gift Act (UAGA), first person consent is given by any person listed as a registered organ donor. Consent includes all eligible organs for transplantation, education, research, and therapy. Please refer to Tab 5 – Policy & Law in this manual for additional information concerning the UAGA.

The State of Arkansas Uniform Anatomical Gift Act legal next of kin priority list:

1. An agent of the decedent at the time of death who could have made an anatomical gift under § 20-17-1204(2) immediately before the decedent's death
2. The spouse of the decedent
3. Adult children of the decedent
4. Parents of the decedent
5. Adult siblings of the decedent
6. Adult grandchildren of the decedent
7. Grandparents of the decedent
8. An adult who exhibited special care and concern for the decedent
9. The persons who were acting as the guardians of the person of the decedent at the time of death
10. Any other person having the authority to dispose of the decedent's body

When the potential for **tissue donation** exists in the hospital, an ARORA coordinator will determine medical suitability. An ARORA Coordinator or Call Center staff member will contact the legal next of kin via telephone for consent to tissue/eye donation. Consent for donation will be recorded and medical /social history will be completed.

Consent Process Involving Medical Examiner or County Coroner

Verbal consent from the medical examiner/county coroner must be secured for any death before the surgical recovery of organs and/or tissue can be initiated. Hospital personnel will follow hospital policy in regard to contacting the coroner's office. ARORA staff will obtain release from the coroner or medical examiner when donation is being considered. ARORA staff will act as the liaison between the coroner's office and hospital.

Medical Examiner cases in which an autopsy is to be conducted is not a rule out for organ and tissue donation. ARORA works closely with the M.E. office to ensure the integrity of medical evidence is maintained and a criminal investigation is not compromised.

Confidential Donor Registry Verification

Arkansas: Pursuant to Act 839

The deceased named below is listed in the Donor Registry. This is an authorization from the deceased for anatomical gifts to be made upon their death. A signature is not required.

Driver's License/ID number OR Registry ID number:	907579195	Date of Registry Activity:	05/30/2000
Full Name:	John Q. Public		
Date of Birth:	12/05/1945		
Last Known Address:	P.O. BOX 1272, RM 2120 LITTLE ROCK, AR 72203		
Donor Comments:			

Under the Arkansas Revised Statute, an anatomical gift not revoked by the donor before death is irrevocable and does not require consent or concurrence of any person after the donor's death. The law also authorizes any examination necessary to assure the medical acceptability of the anatomical gift.

In order to comply with the wishes of this deceased, organ recovery agency representatives are authorized to examine or remove copies of medical records, obtain blood and tissue samples to test for hepatitis, HIV, syphilis, and conduct any other examination to determine the medical suitability of the anatomical gift.

The Registry will only accommodate restrictions or exclusions related to individual organs that can be removed for purposes of transplantation, medical education, therapy, or research. Organs are distributed according to national regulations.

Arkansas Regional Organ Recovery Agency
1100 N. University
Suite 200
Little Rock, AR 72207
(800) 727-7626

Original (File in Medical Record)

Adult Donor Management

The focus of patient care after brain death shifts from cerebral resuscitation to maximizing the function of the various organs for transplantation. Organ deterioration starts immediately. It is critical to take certain steps to maintain donor potential and optimal organ function for the recipients. In the event of severe hemodynamic instability or the development of arrhythmias in the organ donor, resuscitation needs to be immediate and follow ACLS protocol.

Catastrophic Brain Injury Guidelines

Consider obtaining a critical care consult if not already involved in patient care.

Maintain SBP > 100 (MAP > 60)

1. Consider invasive hemodynamic monitoring
2. Adequate hydration: Ensure adequate hydration to maintain euolemia
3. Vasopressor support: If hypotensive post adequate rehydration, utilize Neosynephrine as the first pressor of choice up to 2mcg/kg/min followed by Dopamine if needed.

Maintain Urine Output > 0.5 ml/kg/hr < 400ml/hr (consider DI if > 400ml/hr x2 hours)

1. Treat Diabetes Insipidus with Vasopressin drip 1-2.5u/hr, if UO still > 400ml/hr, give DDAVP 0.5 mcg IVP every 2 – 3 hours.
2. If UO falls below 0.5ml/kg/hr, assess fluid status – may need rehydration or BP support.

Maintain PO2 > 100 & pH 7.35 – 7.45

1. Adequate ventilation: 5.0 – 8.0 PEEP
2. Aggressive respiratory hygiene if not contraindicated by patient's condition, suction and turn every 2 hours.
3. Respiratory treatments to prevent bronchospasm

Other orders to consider:

1. Monitor and treat electrolytes maintaining the following:

Sodium:	134 – 145 mEq/L
Potassium:	3.5 – 5.0 mEq/L
Magnesium:	1.8 – 2.4 mg/dL
Phosphorus:	2.0 – 4.5 mg/dL
Ionized Calcium	1.12 – 1.3 mg/dL
2. Monitor glucose and treat w/ insulin drip if needed (keep 80-200) rather than SQ
3. Monitor and treat Hgb/Hct/coagulation factors (especially if GSW or other penetrating head injury)
 - Maintain Hgb > 8.0 g/dL and Hct > 30%
 - If PT > 18.0 give 2u FFP
 - If Fibrinogen 70-100 give 2u FFP, if < 70 give cryoprecipitate
 - If platelets < 50 give 6pk of platelets**Remember to recheck labs after treatment**
4. Maintain temp 36-37.5 Celsius with bair hugger/warming-cooling blanket

Surgical Recovery of Organs

Following the donor management and organ allocation phases, the ARORA Coordinator will coordinate transfer to surgery with the operating room personnel, anesthesia personnel and visiting recovery teams.

The ARORA Coordinator will notify the operating room and anesthesia personnel of the donor recovery early in the process. The hospital personnel needed for an organ recovery includes: a circulating nurse, two surgical technologists and an anesthesiologist or anesthesiologist.

Ventilator support will be continued until the organs have been surgically removed. Preservation fluids and packaging materials will be provided by ARORA staff.

The approximate OR time for a multiple organ procurement is 3 to 5 hours.

The ARORA Coordinator will provide necessary license information from the visiting surgeons and present the information to the circulating nurse to be included in the patient's medical record.

The ARORA Coordinator will provide the circulating nurse with the names of all visiting personnel.

The donor is positioned supine on the OR bed with arms secured to the sides or extended per physician preference. The skin is shaved from the neck to the pubis and prepped from the chin to the groin and bilaterally to the bed surface.

The procurement of tissue and corneas may follow the organ donation procedure, which may or may not require the continued use of the operation room suite. The recovery of tissue and corneas does not require the participation of hospital operating room personnel.

In general, the abdominal surgeon begins the surgical procedure, while awaiting the arrival of the thoracic teams.

The order of surgical **dissection** of the organs is generally as follows:

- Liver
- Pancreas
- Small Intestines
- Kidneys
- Heart
- Lungs

The order of surgical **removal** of the organs, after dissection, is generally as follows:

- Heart
- Lungs
- Liver
- Pancreas
- Small Intestines
- Kidneys

Organ Donation Surgical Supplies

A breakdown of usual instrumentation is below, although needs vary according to the organs recovered and patient size. The teams are flexible about instruments and available supplies.

Prep: Dura Prep (Chin to thigh)

2 Additional IV Poles in Room

Sponges: Laps x25. No Radiopaque 4x4s

Gowns: 3 additional XL Gowns

Drapes: Abdominal Lap Sheet (disposable) or Chest Sheet with Down sheet:
15 towels (5 border draping) Long Large lolan

Laparotomy Pack: Additional Large Basin

Heart: Add 2 Basins, Table & Cover

Lungs: Add 2 Basins, Table & cover

Suction: Two (Yankauer & Poll Tips) Extra suction Canisters: Neptune suction if available

Cautery: Pencil Bovies x 2

Knives: #10, #11, #15 – on #3 handles **(HOLD)**

Suture: Ties: #0 Silk 30in 2 – 0 Silk 30 in 4 – 0 Silk 30in

Needles: 2 -0 Silk Pop – Offs Sh – 1 **(HOLD)**
 4 – 0 Prolene BV - 1 **(HOLD)**
 4 – 0 PDS **(HOLD)**

Hemoclips: Medium & Large **(HOLD)**

Umbilical Tape x 4

Instruments:

Exploratory Laparotomy Pan

Sternal Saw

Specials:

2 - 10" Needle Holders	1 – 13" CV Aortic Clamp
1 - 10" Vascular Right Angle	2 – Large Patent Ductus Clamp
1 - 10" Regular Right Angle	1 – 5" Richardson Retractor
2 – 8" Debakey Forceps	1 – 3" Deaver Retractor
2 – 10" Debakey Forceps	-Chest Retractor
4 Cooley Scissors 4 pair	-Sternal Saw
2 – 7" CV Mayo Scissors	-Ruler
2 – 7" Mets Scissors	4 – Large Towel Clips
1 – 10" CV Mayo Scissors	
1 – 10" CV Mets Scissors	

Additonal: Iced NaCL Bottles X 15 (Cold but not frozen)

Please place in large basin and pour 2 bottles of alcohol on top of ice. Please prepare this item early in set-up process.

Anesthesia Suggestions for Organ Recovery

Please Note: Anesthesia gases and sedatives are not required for organ donors, secondary to brain death status. If hypertensive, please refer to organ coordinator prior to treating.

Optimal hemodynamic maintenance of the organ donor is required during the entire recovery process (including during the OR procedure to ensure organ viability for transplant).

Pancuronium: To be given once on OR table, this is requested by the recovering surgeon to relax the abdomen or to neutralize spinal reflexes.

Heparin 30,000U or 300u/kg (peds) is given just prior to cross-clamp of the aorta and allowed to circulate.

MAY ALSO BE REQUIRED:

The following items should be available, though not prepared until requested by the recovery team:

Mannitol 12.5gms, 2 vials and Furosemide (Lasix) 100-200mg may be used to promote adequate renal diuresis. **PLEASE** maintain urine output greater than 100cc/hr (1-2 cc/kg/hr)

Dopamine may be infused at a rate of less than 15mcg/kg/min, if fluid volume is ineffective at maintaining a systolic BP > 100, or a MAP >60. Other vasopressor agents may be necessary if the donor is unstable.

IVF: 0.45 NL or LR. Check with the ARORA Coordinator as to what IVFs and rates the donor was on prior to the OR.

Calcium Chloride 1-2 amps and Potassium supplements as needed or requested by recovering surgeon.

Pressure bags may be needed for rapid fluid infusion.

PRBC's (already on hold in blood bank) 4 units may be requested by the recovering surgeon to maintain Hemoglobin levels greater than 10, as heart and liver are more sensitive to hypoxia than are kidneys. Check with ARORA Coordinator for recent Hemoglobin levels.

Albumin 25% or Hespan 500cc X 2, to be used for volume expansion. Avoid albumin if lungs are to be recovered.

Anesthesia Suggestions for Organ Recovery Continued

Respiration/Ventilation: Please maintain an FiO₂ of 100% and all other vent settings used prior to entrance to the OR, unless requested by the recovering surgeons or organ coordinator.

After the organs are recovered, the ventilation and other supportive measures are discontinued. **Please make 4 copies of the Anesthesia records for the ARORA Coordinator.**

The surgeons will close the body and it will be prepared for the Tissue Coordinators or the funeral home of the family's choice. Occasionally these protocols are modified to meet special needs. The ARORA Coordinator will advise the OR staff of any changes to the standard hospital protocols related to post mortem care and will also be available to answer ANY questions the staff may have concerning the recovery process.

Professional fees for the anesthetic services will be honored at the customary rates and may be mailed directly to:

Arkansas Regional Organ Recovery Agency
1100 N. University, Suite 200
Little Rock, AR 72207

Donation After Cardiac Death (DCD) Saving More Lives

Only a small percentage of hospital deaths are brain deaths. Reliance on donation after brain death severely limits organ availability. Formerly called Non-Heart-Beating Donation (NHBD), Donation after Cardiac Death (DCD) has been an end-of life option for patients and families for more than thirty years. Prior to the introduction of brain death laws, DCD was the way in which all organs were recovered.

DCD is an option for families of patients with severe brain damage, but who do not meet the criteria for brain death. After the decision has been made to withdraw life support, the family is offered the option of Donation After Cardiac Death. If the family agrees and the patient meets eligibility, an ARORA OPC places organs for transplant accordance to UNOS policy. Once organs are allocated and surgical teams have arrived, the patient is moved to an operating room where the patient's physician withdraws life support according to hospital policy and protocol. In some situations, support may be withdrawn in the ICU. Once the patient's heart stops beating, the physician declares death. Following an additional five minutes of waiting to ensure no auto-resuscitation, organ recovery begins. Lungs, liver, pancreas and kidneys can be recovered for transplant.

Donation After Brain Death vs. Donation After Cardiac Death (DCD)

	Donation After Brain Death	Donation After Cardiac Death
Injury	Severe Brain Injury from trauma, cerebral vascular accident, anoxic event, other	Severe Brain Injury from trauma, cerebral vascular accident, anoxic event, other
Meets Criteria for Brain Death	Yes Clinical Exam Confirmatory Testing	No
Prognosis	Brain Death	No long term prognosis for recovery from brain injury; can not survive without mechanical ventilator
Action	Referral to ARORA Brain Death declaration by physician Patient on vent until organs recovered Transplant team spend 3 to 4 hours recovering Heart, Lungs, Liver, Pancreas, Kidneys, Intestines	Family and physician elect to withdraw support Referral to ARORA Withdrawal of life support in OR or ICU Cardiac Death is pronounced <i>Unresponsiveness</i> <i>No pulse</i> <i>No cardiac sounds, heart tones</i> <i>No spontaneous respirations</i> <i>No blood pressure</i> Transplant team begins to recover organs 5 minutes after cardiac death has been declared. Lungs, Liver, Pancreas, Kidneys

Hospital Staff's Role in DCD

Staff responsibilities vary depending on hospital DCD protocols, the individuals involved, and the needs of the family. Here are some general guidelines:

Physician

- ! Makes the major decisions about patient care
- ! Works to preserve life before judgment made to withdraw support
- ! Serves as an advocate for the family and ensures families are offered the option of DCD
- ! Declares patient death in the operating room or ICU

Nurse

- ! Provides on-going care to families throughout the patient's hospitalization
- ! Coordinates the clinical management of the patient and support of the family
- ! Makes the referral call to ARORA about the potential DCD donor

Pastoral Care and Social Services

- ! Meets the spiritual, religious and other needs of the patient and family
- ! Serves as family advocate, in collaboration with medical and nursing staff
- ! Contacts ARORA Family Services Coordinator to provides DCD information in response to family request

Step by Step DCD Process

Step One: *An End of Life Decision*

For a patient with a severe brain injury, the family is consulted about the nature of their loved one's injury and prognosis. After exhausting all medical options, families are consulted regarding their feeling about the decision to withdraw life sustaining therapies. The decision to withdraw life support is made by the family and medical team. Discussion participants may include the attending physician, nurse, clergy and social worker.

Step Two: *Offering the Option of Donation*

Only after the decision has been made to withdraw support is ARORA contacted to assess the patient's suitability for organ donation after cardiac death. ARORA also provides consultation to help the medical team approach the family about donation. It is important to have the discussion about donation in a quiet, private setting where the family feels most comfortable. The family is assured that organ donation still allows for an autopsy, open casket funeral and/ or memorial service, and the donation will occur at no cost to them. ARORA coordinates the organ donation process. This will not delay any funeral arrangements.

Step Three: *Consent*

If the family is agreeable to organ donation, the next of kin completes the consent form. ARORA, with the hospital staff, will obtain written consent for several specific actions:

- ! Organ donation after cardiac death
- ! Administration of medications to reduce clotting and improve organ function

Step Four: *Evaluation*

ARORA coordinator and the healthcare team at the hospital coordinate the donation process, including a respiratory drive assessment, organ function assessment and review of medical/social history. ARORA schedules an operating room (OR) time and arranges for the surgical team to arrive.

Additionally, the ARORA coordinator, staff and family discuss the possibility that the patient will not expire within the timeframe needed for donation. Typically, this means the patient is returned to the ICU for care and comfort measures. This does not mean the patient will get better, but that organ donation is not possible.

Step Five: *Coordination and Decision Making*

ARORA staff and medical staff, in consultation with the family, decide where life support will be removed. This process typically occurs in an operating room. In some hospitals, it may take place in the ICU. This decision is made prior to the arrival of the surgical recovery teams.

Step Six: *Preparing for Surgery*

When the surgical recovery teams arrive, they consult with the hospital staff and family. They answer any questions and get an update on the status of the patient. They review the patient's chart, including the consent forms and blood type.

Step Seven: *Final Goodbyes*

The family is given as much time as they need to say goodbye to their loved one. When the patient, hospital staff and family are ready, the hospital staff transfers the patient to the OR or prepares the ICU room for withdrawal of support. When life support is withdrawn in the ICU, the patient's physician declares cardiac death and the team transfers the patient to the OR. If support is withdrawn in the OR, the following process takes place.

Step Eight: *Withdrawal of Life Support*

During transfer, the patient is supported on a ventilator and monitored by the surgical team and hospital staff. The hospital staff member designated to withdraw support administers medications such as heparin. These medications prevent blood clotting and ensure good organ function. When the team is ready, the patient is extubated by the attending physician or his/her designee. The recovery surgical team cannot administer medications, withdraw support or declare cardiac death.

As in all settings where support is withdrawn, comfort measures for the patient are of the utmost importance. The attending physician may administer an analgesic based on his/her clinical judgment. The same end-of-life care is given to the patient regardless of whether support is withdrawn in the ICU or OR. In some situations, the family may be present in the OR for the withdrawal of support.

Step Nine: *Organ Recovery*

The attending or his/her designee declares cardiac death. The surgical recovery team waits an additional five minutes to ensure there is no autoresuscitation of the heart. Research has shown that a patient's heart will not start beating beyond two minutes after the declaration of cardiac death. After waiting five minutes, organ recovery begins.

If the patient does not expire within the timeframe need for organ donation (up to 2 hours), the medical staff moves the patient to a location as outlined in Step Four and continues to administer palliative care.

Step Ten: *Saving More Lives*

The organs are recovered to ultimately give life to patients in need. Up to six lives can be saved with one patient's gift.

Tissue Recipient

 *Karlye Deutsch*



" Because of bone cancer, Karlye faced possible amputation of her leg, but thanks to the gift of donation, she is now a typical kindergartner," said her mother, Denise.

Tissue Donation Referral Process

800-727-6726

All deaths must be reported to ARORA within an hour of the cardiac death to determine suitability for tissue donation in compliance with CMS Conditions of Participation and hospital policy. This includes DOA, fetal demise on all infants issued a birth certificate and early organ referrals.

The Communication Center is available 24/7 to evaluate patients for potential donation. The Communication Center employees are a contracted service with ARORA and have been trained to coordinate the consent, medical/social history and recovery process with the ARORA Tissue Coordinators and the Eye Bank Coordinators.

Step One: *The Referral Phone Call*

Please have the patient's chart available at the time of the referral phone call. The information on the following page will be asked during the referral call to determine eligibility for donation.

The Operator will provide a Referral number and Operator's name for hospital records, as well as deferral reason, if applicable.

Step Two: *Do NOT speak to the family about donation*

Most patients are not eligible for donation. ARORA and CMS ask that donation be discussed with families of eligible donors by the most effective requestor. Based on that requirement, the referral phone call must be made first, and then family approached for donation by the most trained, effective requestors. That person is typically a Call Center Operator or an ARORA Coordinator.

If the family is capable of speaking with ARORA after they have been informed of the death, it is best to allow them some measure of privacy to speak with the operator, if that is possible.

It is not required that families speak with an ARORA representative before leaving the hospital. It is, however, essential the hospital record a good contact phone number to reach the family after they have left the hospital. Many families consent to donation once they are in familiar surroundings with their support system around them.

Exception to Step Two: *Hospital Designated Requestors*

See Designated Requestor page if this hospital has trained, certified requestors.

Step Three: *Do not release the body to the funeral home*

Do not release the body of an eligible donor to the funeral home until the Operator or Coordinator has had an opportunity to speak to the family and call the hospital with the family's decision. There are 3 reasons this is important.

First- The funeral home may embalm the body before the family has had a chance to make a decision. Once a body is embalmed, donation can not take place.

Second – The funeral home may have to return a body from the funeral home back to the hospital for donation, thus inconveniencing the funeral home.

Third- Families that consent to donation but do not want their loved one transported to Little Rock for the tissue recovery expect the recovery to be done in the hospital. It is sometimes difficult to re-admit a deceased patient.

Step Four: A Tissue Donor

The legal next of kin of an eligible donor must give consent for tissue donation. ARORA will explain the procedure to the family, including the following details:

- ! where donation will take place,
- ! how long the recovery process will take,
- ! no cost to the family for donation,
- ! donation will not interfere with their funeral plans or arrangements,
- ! tissue that can be recovered and how it can be used,
- ! reasons a donation could be stopped,
- ! notification of positive lab results,
- ! follow up letter detailing recovered tissue

A tissue donor will meet all medical and social criteria for donation. Tissue that can be recovered and transplanted includes:

Heart valves	Corneas
Skin	Saphenous Veins (Men)
Tendons	Arteries (Men)
Long bones of the arms and legs	

A donor is usually transported from the hospital to the ARORA operating room suite in Little Rock. Once the tissue recovery and reconstruction are complete, ARORA will transport the body to the funeral home of the family's choice.

Identification of the body is required by either a toe tag or wrist band. Donation can not proceed until someone who worked with the donor has given a positive identification. At times, this has required an off-duty employee to return to the hospital to make verify identity when toe tag or wrist band was not present.

A complete copy of the patient's chart will be required by the ARORA Coordinator for use by the tissue processors.

ARORA Coordinators become the liaison between the family, funeral home and coroner's office.

When tissue recovery is completed at the hospital, it will be performed in the operating room. The tissue recovery team will provide sterile instruments and packs. Under normal circumstances, hospital supplies are not required. According to individual hospital policy, a hospital employee may or may not be required to accompany the tissue recovery team to the OR.

DESIGNATED REQUESTOR

Designated Requestors are individuals who have been designated by the hospital and have completed a training course offered or approved by ARORA and designed in conjunction with the Eye Bank, to initiate the tissue request process with the family. The course offers methodology to support the potential donor family and offer donation options in a sensitive manner.

Any individual who provides information to the family about donation, informs them of donation options, or makes the request must be an ARORA representative or a Designated Requestor.

The consensus of several studies supports the assertion that a team approach is most effective for obtaining consent for donation. The designated requestor approach to donation options with families is best demonstrated utilizing the following practices:

The family members are given time to understand and accept their loved one's death before discussing donation options. It is best to allow time (amount varies) between the conversation about death and the conversation about donation.

When the option for tissue donation exists, the designated requestor may make the request for tissue donation, after donor suitability has been established. ARORA provides training programs suited for offering tissue options.

The Designated Requestor must establish the legal next of kin, in compliance with the revised Uniform Anatomical Gift Act, to approach regarding donation. The request for donation should be made in a quiet, private setting.* If the legal next of kin is unavailable, the approach for tissue donation will be made by the Call Center Operator.

*William DeJong, PhD, Franz, Holly G., BSN, CPTC, Wolfe, Susan M., BA & et al. (1998, January). Requesting Organ Donation: An Interview Study of Donor and Nondonor Families. American Journal of Critical Care 7 (1), 13-23.



Guide for Referring ALL Deaths to ARORA

800-727-6726

**** When reporting a TOD on an Organ Referral, please let the operator know. Use the Referral number in the patient's chart. ****

1 Hospital name	Nursing Unit	Person making Referral	Direct call back phone number
2 Patient First, Mid initial, Last name	DOB & Age	Sex & Race	Height & Weight
Date & Time of Admission	Date & Time Pronounced		
Was patient on a vent?	How long on vent?		
3 Has the legal NOK been offered the option of donation prior to this phone call?	By whom?		
4 General Hospitalization Information:	COD or Suspected COD		
	Circumstances surrounding admit (mechanism of injury/history of present illness)		
	Has family been notified of the death?		Where is family now?
	Who is Next of Kin?		Good contact phone numbers (cell numbers)
	Where is body now?		Does hospital have a morgue?
	Has Funeral home been notified?		
	Funeral Home Name and phone number		
	CXR: date		
	Temp: date		
	IV fluids: N/S, D5W, Ringers lactate		
	Blood products: Whole blood, RBC, Reconstituted blood, plasma, platelets, albumin, hetastarch, dextrans, cryoprecipitate		
	ABX:		
	WBC: date		
	Cultures: Sputum, blood, Urine and date		
	How much in the last hour?		
	How much in the past 48 hours?		
	Past medical history or other active illnesses		
5 Coroner's name	Has the Coroner released the body?		
Please do not release the body to the funeral home until you hear from ARORA coordinator!			

If family is ready to leave the hospital, please obtain GOOD contact phone numbers where family can be reach in next hour
If patient is a potential tissue donor, please keep the body cool and elevate head of bed for potential eye donors.

Arkansas Lions Eye Bank and Laboratory



PEEK-A-BOO
I SEE YOU
because someone
was an eye donor

Eye Donation

The **Arkansas Lions Eye Bank and Laboratory** is the designated Eye Bank for Arkansas. The ALEB is available 24 hours a day, 7 days a week to provide corneal tissue.

The success of the Eye Bank, to meet the needs of those who are waiting, relies on the cooperation of hospital administrators, physicians, nurses, ancillary staff, and the donor families who give consent for donation.

By assisting the Eye Bank in acquiring corneal tissue, hospital personnel can have a direct role in reducing the waiting list. The Eye Bank acts as a liaison between the donor, next of kin, and recipient to coordinate ocular tissue transplantation. We rely on members of the medical profession at all levels to take the first step with the gift of sight by referring potential donors to the Eye Bank.

Donor Referral & Consent

Because there is no substitute for human corneal tissue, cornea transplantation depends solely on cornea donation. Like organs and other tissue, corneas are donated after death, and the consent of the donor's next of kin is required.

In accordance with the revised Arkansas Anatomical Gift Act, the Eye Bank asks that hospitals notify ARORA as soon as the donor's death is imminent or as soon as death occurs. It is important that no one approach or speak to the donor's family regarding donation until ARORA or the Eye Bank have assessed the donor for suitability.

Before calling, please see the "Guide for Referring All Deaths to ARORA" page in the previous, Tissue Section.

Care of the potential eye donor

Healthcare professionals play a key role in preserving the integrity of donated tissue before recovery. To ensure the best possible tissue graft, perform the following:

- Close the eye lids of the deceased
- Switch off the fan
- Raise the head of the bed to 30-45 degrees, this will decrease the chance of bruising during recovery; a pillow or flannel roll placed under the patient's head may also be used
- Place a cold compress or package of ice over the closed eyelids, such as examining gloves filled with ice. This will also decrease the risk of any bruising

Facts about eye donation

- Eyes can be donated only after death
- Eyes should be recovered within eight (8) hours from the time of death
- Eyes can be removed by a network of volunteer, certified eye enucleators that encompasses the entire state of Arkansas
- A small quantity of blood will be drawn to rule out communicable diseases

Frequently Asked Question About Eye Donation

Who can be an eye donor?

Almost anyone can. Cataracts, poor eyesight, or age do not prevent corneal donation. It is important for individuals wanting to be donors to inform family members of their wishes.

The Eye Bank accepts eyes with ages from 2 through 79 as potential transplant donors. Some medical conditions pose a problem for transplantation and a hazard for medical personnel. An extensive review of the donor's medical, family, and social history is conducted as well as detailed examinations of the donor eyes and corneas.

What happens if corneas are not suitable for transplant?

Donors and eyes are carefully evaluated. Corneas determined to be unsuitable for transplant may be used for medical research and education, if the family consent includes all applications.

How do research and education benefit from eye donation?

Research on glaucoma, retinal disease, eye complications of diabetes, corneal wound healing, and other sight disorders helps to advance the discovery of the cause and effects of these conditions. This research leads to new treatments and cures. Education of staff, medical residents, and surgeons is conducted using donated eyes. The training of new surgeons is also enhanced by established surgeons developing new surgical techniques.

Are there religious objections to eye, organ, or tissue donations?

Donation is an opportunity to help save a life or restore someone's sight. Eye, organ, and tissue donation are consistent with the beliefs and attitudes of major religions. For a review of religious views concerning organ and tissue donation, see tab 6, "Summary Statements of Various Religious Groups".

Will eye donation affect the appearance of the donor?

Great care is taken to preserve the donor's appearance. Enucleation is a delicate sterile surgical procedure. Some slight risk of swelling and bruising exists but funeral viewing can be conducted through the restorative efforts of funeral directors.

Whom do corneal transplants benefit?

There are several different reasons for requiring a corneal transplant. Some of the more common are as follows:

- Keratoconus – a disease where the central cornea thins and bulges forward
- Fuch's Dystrophy – an hereditary disease in which the cells that maintain corneal clarity are gradually lost
- Aphakic and Pseudophakic bullous keratopathy – conditions where the cells that maintain corneal clarity are damaged as a result of cataract surgery
- Chemical/Physical injuries to the cornea

How is sclera used?

There are a few reasons for requiring a scleral transplant. The major ones are as follows:

- Ocular implantation after enucleation – a synthetic eye implant is wrapped in sclera. The muscles are then attached to the sclera, which allows the artificial eye to move with the companion eye.
- Lid retraction – the sclera is used to reconstruct the eyelid
- Glaucoma surgery – an Ahmed valve is inserted into the eye to reduce intraocular pressure. The valve is covered with a piece of sclera to allow movement of the eyelids across the implant.

Is the whole eye transplanted?

No, only the cornea (the clear, front part of the eye) is used for corneal transplants. The sclera (white part) is sometimes used for procedures such as glaucoma surgery and lid reconstruction. The rest of the eye can be used for research (if allowed from the consent) to aid in future treatment of eye disease.

Is the family told who will receive the eyes?

No. The actual identities of the donor and recipients are kept confidential under present laws. However, recipient and donor families can communicate with each other anonymously via the Eye Bank.

What if I have an ethical/moral issue with eye donation?

Although some individuals are uncomfortable with the idea of eye donation, it is important to remember, **the decision for eye donation is personal**. Please remember, if patients are not referred to the Eye Bank, that choice has been taken away from the family. Experience has confirmed, many donor families are unaware of eye donation and are grateful when told they have the power to help someone.

How does the eye bank ensure safe corneal tissue for transplantation?

The donated eyes and the donor's medical history are evaluated by the Eye Bank in accordance with the Eye Bank Association of America's (EBAA) strict Medical Standards. The EBAA provides standards for eye banks in training personnel to evaluate donor eyes. The EBAA is a non-profit organization of eye banks dedicated to the restoration of sight through the promotion and advancement of eye banking. The ALEB is registered with and inspected by the FDA for compliance with Tissue Industry Standards (GTP).

How is the donor suitability determined?

Potential donors are carefully screened for medical suitability and high risk factors. HIV, Hepatitis B and syphilis tests are run before any tissue is released for surgery. Should any tissue be deemed unsuitable for transplant, the information is scrutinized for possible use in research. Our primary concern is for the ethical treatment of the donor and the safety of the potential recipients, Eye Bank staff and researchers.

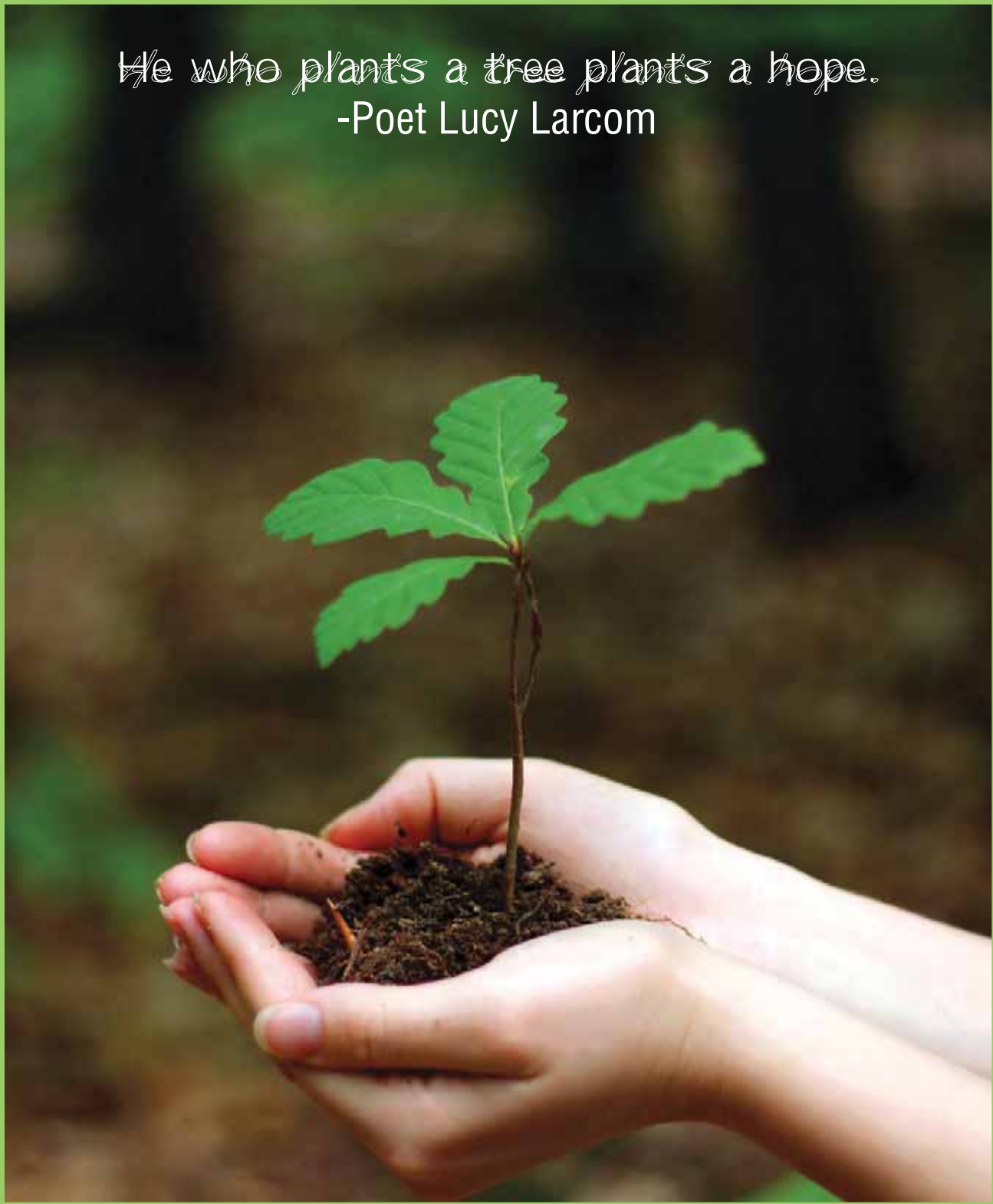
Arkansas Lions Eye Bank and Laboratory Mission Statement

The primary mission of the Arkansas Lions Eye Bank and Laboratory with the support of the Lions Club of Arkansas is to give sight to Arkansans by providing safe, high quality corneal and scleral tissue.

The secondary mission is to support eye research at the University of Arkansas for Medical Sciences and to educate Arkansans about the importance of eye donations.

Together We Grow Stronger

He who plants a tree plants a hope.
-Poet Lucy Larcom



The Uniform Anatomical Gift Act (UAGA)

Every hour a patient in the United States dies for lack of an available organ transplant – that’s more than 7,000 patients every year. According to the United Network for Organ Sharing (UNOS), today there are more than 90,000 people on the waiting list for organ transplantation. To facilitate availability of organs, a new revision to the **Uniform Anatomical Gift Act** (UAGA) was approved today by the National Conference of Commissioners on Uniform State Laws (NCCUSL) at its 115th Annual Meeting in Hilton Head, South Carolina.

Efforts to overcome the donor shortage date back nearly 40 years to the promulgation of the first Uniform Anatomical Gift Act of 1968, which was subsequently adopted by all 50 states and the District of Columbia. That original act stipulated – for the first time – that an individual, upon death, could irrevocably donate his or her organs for medical purposes by signing a simple document before witnesses. As simple as this sounds, this was a radical departure from centuries of common-law precedent, which held that a body immediately after death became the property of the next-of-kin.

The original UAGA represented a great achievement in American law, sweeping away the antiquated principles of the common law and the inadequate provisions of existing organ donor legislation, thus eliminating many of the impediments to the transplantation of vital organs.

Since that time, however, new medical technologies have dramatically increased the number of transplants and the demand for organs, resulting in a serious organ shortage. A revision to the UAGA was approved in 1987 in an effort to help narrow the growing gap between supply and demand. However, the 1987 revision was only adopted in 26 states. Consequently, there is significant non-uniformity between the states. Further, neither the 1968 or the 1987 version of the UAGA comports with changes in federal law providing for an allocation system through hospitals and procurement organizations in securing organs for transplantation.

The new revision in 2006 updates the act in light of these changes in federal law and regulation, and related developments in the field of organ donation.

Like the prior versions, the new UAGA provides that any individual may make an anatomical gift by signing a document of gift; no witnesses are necessary for this document.

If an individual does not make a gift before death, the new UAGA provides a list of persons – in priority – who may make an anatomical gift on behalf of the deceased. The list is slightly expanded from prior versions, and now includes agents acting under a health-care power of attorney or other record, adult grandchildren, or a close friend.

The new UAGA includes strengthened language that bolsters the rule (also included in the 1987 act) that a donor's decisions whether making an anatomical gift are honored and not subject to change by others. It is now common practice for organ procurement organizations to seek affirmation of an anatomical gift from the donor's family. This can result in a reversal of a donor's donation decision. **The new UAGA explicitly takes away from families the ability to amend or revoke donations made by donors during their lifetimes, affirming the irrevocable quality of a document of gift.**

The new revision permits an individual to sign a refusal that bars all other persons from making an anatomical gift of the individual's body or parts. A refusal generally can be made by a signed record, a will, or, under limited circumstances, orally. By permitting refusals, the UAGA recognizes the autonomy interest of an individual either to be or not to be a donor.

The revision also allows for the making of anatomical gifts on donor registries, which are already in use in some states. The act encourages the creation of donor registries, whether maintained by the state or by another entity. Minimum requirements for a donor registry include making the registry electronic and accessible at all times.

Act 839 of the Regular Session

1 State of Arkansas *As Engrossed: S3/15/07*
2 86th General Assembly **A Bill**
3 Regular Session, 2007 SENATE BILL 798
4
5 By: Senator Horn
6

7
8 For An Act To Be Entitled
9 AN ACT TO CREATE THE REVISED ARKANSAS ANATOMICAL
10 GIFT ACT TO PROVIDE A PROGRAM FOR POST-MORTEM
11 DONATIONS OF ALL OR PART OF A HUMAN BODY; AND FOR
12 OTHER PURPOSES.
13

14 Subtitle
15 AN ACT TO CREATE THE REVISED ARKANSAS
16 ANATOMICAL GIFT ACT TO PROVIDE A PROGRAM
17 FOR POST-MORTEM DONATIONS OF ALL OR PART
18 OF A HUMAN BODY.
19

To read the entire Senate Bill 798, Revised Uniform Anatomical Gift Act, go to www.arora.org

LEGISLATION

Laws Regarding Transplantation

Organ transplantation is the only medical therapy that is currently regulated entirely by law. From donation to transplantation, the federal government (and to some extent, the state governments) monitors the administrative and financial aspects of this process. These regulations are considered by most professionals to be positive because they ensure that organs are shared on a fair and equitable basis. In addition, the responsibilities and function of healthcare professionals are sanctioned and safeguarded by these laws so that their responsibilities may be discharged with assurance and protection medically, legally and ethically.

These laws provide the legal framework for organ donation.

Legal Framework for Organ Transplantation

Uniform Anatomical Gift Act (1968, 1987, 2007)

- Protects healthcare professionals from liability
 - Simplifies consent, allows for first person consent
 - Prohibits sale or purchase of organs
 - Requires hospitals to request donation
-

National Organ Transplant Act (1984)

- Established Organ Procurement and Transplant Network
- Established Task Force on Organ Transplantation

Task Force Report (1986)

- Guidelines for fair and equitable transplantation
 - Proposed required request
 - Proposed organ procurement organizations
 - Established United Network for Organ Sharing as the national Organ Procurement and Transplant Network
-

Omnibus Budget Reconciliation Act of 1986

- Mandates establishment of organ procurement programs in all hospitals receiving Medicare/Medicaid funds
 - Mandates compliance with United Network for Organ Sharing
 - Mandates required request
-

(continued)

Center for Medicare & Medicaid Services (CMS) – Conditions of Participation (1998)

- Hospitals must incorporate an agreement with an Organ Procurement Organization (OPO), tissue bank and eye bank
 - Hospitals must notify the OPO, in a timely manner, of all deaths and imminent deaths
 - The OPO determines medical suitability for donation
 - Hospital ensures the family of each potential donor is informed of their options to donate organs, tissues or eyes or to decline donation
 - Only designated requestors can initiate the donation request to the family
 - Discretion and sensitivity surrounding the request to the family is encouraged
 - Hospitals must work cooperatively with the OPO in death record review and maintaining potential donors
-

The Uniform Anatomical Gift Act

This Act was passed in 1968 and was adopted by all 50 states by 1970. The Act specifically protects healthcare professionals from legal liability resulting from organ procurement. With the increasing success of transplantation and the subsequent increase in the demand for donor organs and tissues, new measures were needed to facilitate the organ donation process. Thus, in 1987, an amendment to the act was proposed by the National Conference of Commissioners on Uniform State Laws. In the amendment, consent from next of kin is no longer required if an individual has signed a donor card, has designated on their driver's license a willingness to donate, or has signed some other legal document to this effect. In addition, the amended act requires that hospitals establish agreements with other regional hospitals and organ procurement organizations to coordinate procurement, and prohibits the sale or purchase of organs or tissues. It is expected that all 50 states will adopt the amended act. Arkansas accepted the amended act in April 2007. See Tab 5 – Policy and Law and read entire Senate Bill 789 at www.arora.org.

The Task Force on Organ Transplantation

The 1984 National Organ Transplant Act also established the Task Force on Organ Transplantation, which in 1986 published its landmark report on the medical, legal, social, ethical, and economic aspects of organ procurement and transplantation. This historic document expresses our national commitment to fair and equitable donor organ sharing. It reported that only a small portion of available organs were being procured, and recommended guidelines to promote more widespread and equitable transplantation. Among these was the recommendation that physicians be required to identify potential organ donors and to inquire about donations from the next of kin. The outgrowth of these recommendations are today's organ procurement organizations and the system established and regulated by UNOS.

The Omnibus Budget Reconciliation Act of 1986

This law required that by October 1, 1987, all hospitals receiving Medicare and Medicaid reimbursement – in effect, virtually all hospitals in the United States – must establish programs to encourage organ and tissue donation. It also required that hospitals comply with UNOS rules regarding allocation of procured organs and “assure that families of potential organ donors are made aware of the option of organ or tissue donation and their option to decline.”

Center for Medicare & Medicaid Services – Conditions of Participation (1998)

These regulations became effective on August 21, 1998. This final rule addresses only provisions relating to organ donation and transplantation. It imposes several requirements a hospital must meet that are designed to increase organ donation. One of these requirements is that a hospital must have an agreement with the Organ Procurement Organization (OPO) designated by the Secretary, under which the hospital will contact the OPO in a timely manner about individuals who die or whose death is imminent in the hospital. The OPO will then determine the individual's medical suitability for donation. As well, the hospital must have an agreement with at least one tissue bank and at least one eye bank to cooperate in the retrieval, processing, preservation, storage, and distribution of tissues and eyes, as long as the agreement does not interfere with organ donation. The final rule requires a hospital to ensure, in collaboration with the OPO with which it has an agreement, that the family of every potential donor is informed of the option to donate organs or tissues or not to donate. Under the final rule, hospitals must work with the OPO and at least one tissue bank and eye bank in educating staff on donation issues, reviewing death records to improve identification of potential donors, and maintaining potential donors while necessary testing and placement of organs and tissues take place. In addition, transplant hospitals must provide organ-transplant-related data, as requested by the OPTN, the Scientific Registry, and the OPO. The hospital must also provide, if requested, such data directly to the Department.

Excerpts from “Transplant Challenge: A Role For Healthcare Professionals”

Consultant: Barbara A. Gill, RN, MN, Clinical Nurse Specialist, Sandoz, Inc. 1988

Federal Register. (1998, June 22) – Medicare and Medicaid Programs; Hospital Conditions of Participation; Identification of Potential Organ, Tissue, and Eye Donors and Transplant Hospitals’ Provision of Transplant Related-Data. Health Care Financing Administration [HCFA], DHHS 63 (119). 42 CFR Part 482, pages 33856-33875.

MEMORANDUM OF AGREEMENT

BETWEEN THE

AND THE

Arkansas Regional Organ Recovery Agency

This Agreement is made and entered into this _____ day of _____ by and between _____ (hereinafter called the "Hospital"), and Arkansas Regional Organ Recovery Agency (hereinafter called "ARORA"), an Arkansas not-for-profit corporation.

WITNESSETH, the purpose of this Agreement is to provide a basis for interaction between the Staff of ARORA and the Staff of the Hospital for the purpose of organ and tissue recovery.

NOW THEREFORE, in consideration of the following mutual purposes, covenants, and condition, it is agreed as follows:

SECTION I

ARORA shall do or cause to be done the following:

- A. Adhere and comply with all rules and regulations for Organ Procurement Organizations as stipulated by the Centers for Medicare and Medicaid Services formerly known as the Health Care Financing Administration, United Network for Organ Sharing, the Food and Drug Administration, the Joint Commission on Accreditation of Healthcare Organizations, the Arkansas Anatomical Gift Act, and such other state and federal laws, regulations and rules as may be applicable;
- B. Promote familiarity with organ and tissue donation through both public and professional education programs;
- C. Work in a cooperative effort with the attending hospital personnel as needed to:
 1. Identify and evaluate potential organ/tissue donors
 2. Obtain donation consent and work with the medical examiner/coroner as deemed necessary
 3. Maintain the donor until the scheduled recovery time;
- D. Coordinate the surgical removal, preservation and transportation of donated organ/tissues; and

- E. Strive to maintain an ethical and professional manner during the recovery process, thus providing dignity and honor to the donor and his/her family.
- F. Maintain confidentiality when accessing and reviewing Hospital records. Hospital information will be treated as confidential.
- G. Shall send only qualified, trained individuals that have been authorized by ARORA as a part of the recovery team to do organ and tissue recoveries.

SECTION II

The Hospital shall do or cause to be done the following:

- A. Establish standardized policies and procedures for the organ/tissue donation process. It is agreed that Hospital personnel may, pursuant to Hospital policy, request consent for organ and/or tissue donation after being trained by ARORA as a Family Advocate (Designated Requester) and after clinical suitability has been determined by ARORA.
- B. Work in a cooperative effort with ARORA personnel in the identification, referral, and maintenance of potential organ/tissue donors.
- C. Provide hospital personnel and services including, but not limited to laboratory, pathology, surgery, anesthesiology, cardiology consult and other miscellaneous support service as well as suitable facilities and other personnel necessary for the recovery of organs and tissues which includes providing an ICU nurse to assist in fulfilling ARORA's medical orders relating to providing patient care and donor maintenance.
- D. Comply with all laws, regulations and rules as they pertain to the pronouncement of death and organ/tissue procurement.
- E. Provide access to medical records to ARORA personnel for medical records review for the purpose of assessing the Hospital's level of compliance with required reporting of death referrals.
- F. Establish and consistently convene an Organ and Tissue Committee in accordance with guidelines set forth by state regulations. The Hospital will provide notification to ARORA of the committee meetings to allow continuing participation from ARORA.
- G. Provide release to the funeral home only after previous notification has been given to ARORA in accordance with Medicare Conditions of Participation.

SECTION III

Any additional costs associated with organ and/or donation effort incurred at the request of ARORA shall be billed separately to ARORA. Upon approval by the Organ Procurement Coordinator involved in the donation process, reasonable and customary charges shall be paid by ARORA. These costs may include, but are not limited to:

- A. Intensive care costs
- B. Donor evaluation and support
- C. Laboratory and Pathology Services
- D. Operating Room and associated costs
ARORA will provide staff and supplies for bone, heart valve, and soft tissue recoveries. For tissue recoveries occurring in the hospital's operating room, a flat rate of \$200.00 may be billed and submitted by the hospital to ARORA to cover the time the operating room is utilized by ARORA's Tissue Recovery Team.

The tissue recovery operating room flat rate may be amended as agreed upon in writing by both parties.

To ensure all applicable costs are paid by ARORA, the Hospital shall submit the entire medical bill to ARORA.

SECTION IV

The term of this agreement shall commence on _____ and renew automatically each year on this date. This Agreement supersedes all prior understandings and/or agreements between the parties. Either party may request in writing that the parties discuss any provisions of the Agreement, which may require revision due to any legislative or regulatory mandates. Either party may terminate this Agreement upon 90 days prior notice in writing to the other.

SECTION V

- A. This Agreement is governed and construed in accordance with the laws of the State of Arkansas.
- B. Both the Hospital and ARORA shall perform services hereunder only as independent contractors and nothing herein contained shall construed to be inconsistent with that relationship or status. Under no circumstances shall the Hospital or ARORA be considered to be an employee or agency of the other nor shall this Agreement create a partnership or joint venture between the parties. Other than is set forth herein above, neither party

intends for this Agreement to alter, in any way, their respective legal rights or their legal obligations to each other, or to any third parties. This Agreement shall not constitute, create, or in any way be interpreted as a joint venture partnership or formal business organization of any kind.

- C. Neither the Hospital or ARORA shall discriminate against any person who performs of any of the terms or conditions of this Agreement, because of race, color, sex, creed, national origin, age or handicap; provided, however, that with reasonable accommodations, such handicap does not preclude the person's participation therein.

- D. Hospital agrees that, until the expiration of four (4) years after furnishing of services pursuant to this Agreement, it shall, upon appropriate request, make available to the Secretary of the Department of Health and Human Services or the Secretary's duly authorized representative, or upon request of the Comptroller General or the Comptroller General's duly authorized representative, this Agreement and such books, documents and records that are necessary to clarify the nature and extent of the costs of services provided under this Agreement. Availability of Hospital's books, documents and records shall be subject at all times to such criteria and procedures for seeking or obtaining access as may be promulgated by the Secretary of the Department of Health and Human Services and regulations and other applicable laws. Hospital's disclosure under this paragraph shall not be construed as a waiver of any other legal rights to which Hospital may entitled under the law or regulations.

HOSPITAL

ARORA

By: _____
Signature

Print

Title

Date

By: _____
Signature

Print

Title

Date

Credentialing of ARORA Staff

The Arkansas Regional Organ Recovery Agency shall have the following standards to facilitate and coordinate the recovery of all donated organs/tissues for transplantation.

The Arkansas Regional Organ Recovery Agency shall ensure that any surgeons working as consultants for ARORA for the recovery of donated organs (i.e., surgeons whose fees are paid by the OPO) meet the qualifications and standards as adopted by the OPO Medical Director and/or its Board of Directors. The criteria adopted are those found in the UNOS policies in dealing with the criteria of approved UNOS certified transplant physicians.

Clarification of Credentialing and Privileging of Visiting Organ Procurement Teams

On October 5, 1998 The Joint Commission issued the following clarification in the form of a Q & A:

Q: Is a healthcare organization required to perform credentials review and grant clinical privileges to members of Transport Teams and Organ Recovery Teams for clinical intervention provided in healthcare organization?

A: No. Transport Teams, such as for Neonatal ICU patients, trauma victims, long term care facility residents or burn patients, and Organ Recovery Teams, often contain licensed independent practitioners who would otherwise require clinical privileges to work within a facility. These teams often consist of individuals on rotational assignments, who may only infrequently visit the healthcare organizations.

Their work is too limited to undergo performance improvement activity review at each site that is meaningful for the renewal of clinical privileges.

The Teams work as part of the healthcare organizations plan for **continuity of care**. The patient, although still in the healthcare organization, is transferred to the responsibility of the Team. When that occurs, the responsibility for the performance of the members of the Team as it applies to the patients and as required by Joint Commission standards, passes to the Team.

Teams work in healthcare organizations on the basis of some form of agreement, whether a contract, Memorandum of understanding or regional governmental authority. It is the healthcare organization's responsibility to ensure that the agreement provides for qualified individuals who are properly authorized by their organizations.

Note: While this answer provides an exception to the usual procedures required for credentials review, privileging, competency and job descriptions, it does not remove the health care organization from its obligation to ensure that it enters into agreements that comply with JCAHO standards.

From the Joint Commission website:

www.jointcommission.org/AccreditationPrograms/Hospitals/Standards/FAQs

Reimbursement Policy for Organ Recovery

ARORA (Arkansas Regional Organ Recovery Agency) will pay bills based on usual and customary charges. We utilize the services of American Medical Bill Review (AMBR) to process all hospital bills for payment. AMBR is a cost containment provider who conducts file audits on all OPO hospital bills.

File audits consist of comparing charges in itemized billings, line by line, with information contained in the correspondence, to medical records that contain physician order sheets, critical care flow sheets, anesthesia/surgery sheets, medication administration sheets, etc. AMBR also determines usual and customary charges by using a database that is specific to our geographic area.

The usual turn-around time for payment should be around 30 days; however, if you experience an unusual delay, please contact Felicia Bowman at (501)907-9124.

It is our policy that all invoices incurred by our agency must be submitted to us within a timely manner. In order for us to close our fiscal year and meet the Medicare Cost Report filing deadline, we must process all invoices in the fiscal year that they were incurred.

Our fiscal year ends September 30. All invoices in a fiscal year that are incurred on or prior to September 30, must be received by our office no later than December 31 to be processed for payment. A 3 month grace period is given to allow vendors time to submit any last minute invoices for expenses that were incurred at the end of the fiscal year. Any invoices received after that date will not be considered for payment.

To Remember Me

The day will come when my body will lie upon a white sheet neatly tucked under four corners of a mattress located in a hospital busily occupied with the living and the dying. At a certain moment a doctor will determine that my brain has ceased to function and that, for all intents and purposes, my life has stopped.

When that happens, do not attempt to instill artificial life into my body by the use of a machine. And don't call this my deathbed. Let it be called the Bed of Life, and let my body be taken from it to help others lead fuller lives.

Give my sight to the man who has never seen a sunrise, a baby's face or love in the eyes of a woman.

Give my heart to a person whose own heart has caused nothing but endless days of pain.

Give my blood to the teenager who was pulled from the wreckage of his car, so that he might live to see his grandchildren play.

Give my kidneys to one who depends on a machine to exist from week to week.

Take my bones, every muscle, every fiber and nerve in my body and find a way to make a crippled child walk.

Explore every corner of my brain. Take my cells, if necessary, and let them grow so that, someday, a speechless boy will shout at the crack of a bat and a deaf girl will hear the sound of rain against her window.

Burn what is left of me and scatter the ashes to the winds to help the flowers grow.

If you must bury something, let it be my faults, my weaknesses and all prejudice against my fellow man.

Give my sins to the devil.

Give my soul to God.

If, by chance, you wish to remember me, do it with a kind deed or word to someone who needs you.

If you do all I have asked, I will live forever.

by Robert N. Test

Religious Views Concerning Organ and Tissue Donation

When death is imminent, it can call attention to the importance of the spiritual dimension of life. When faced with the decision of organ and tissue donation during the trauma of a family member's death, a person's religious group's position on the subject suddenly becomes very important. As the decision is being made, the question often arises, "What does my religious tradition believe about organ and tissue donation?" Recent surveys indicate that less than 10 percent of those surveyed were aware of their religious group's doctrine or position regarding organ and tissue donation. As a result, the decision maker often looks to his or her parish clergy person or hospital chaplain for an informed answer about a particular religious group's position.

Religious groups have been on both the "cutting edge" of biomedical ethics and on the "slow to accept" end of the issue. No one person or even an assembly of religious representatives can speak for numerous religious groups. The "connectional" religious groups appear more likely to have official positions on the subjects such as organ and tissue donation. The "free Church" traditions champion the idea that no group can usurp the autonomy of the local congregation. Thus, the religious group's official resolution is not binding on the local congregation or individual persons. It is, therefore, difficult to state an official position for some of the nation's larger religious groups. Research shows, however, that the vast majority of religious groups do support organ and tissue donation and transplantation so long as it does not impede the life or hasten the death of the donor.

Research into the positions of various religious groups reveals the underlying attitude that unless the group has taken action to prohibit organ or tissue donation and transplantation, it is usually assumed that such donation is permissible. It is encouraged as a charitable act that saves and /or enhances life; therefore, it requires no action on the part of the religious group. Although this is a passive approach to affirming organ and tissue donation and transplantation, it seems to be the position of a large segment of the religious community. Some groups have taken a more pro-active stance in recent years, feeling that a resolution or adopted position encourages people to seriously consider the matter and plan accordingly. This segment appears to be increasing in number with only a few religious groups actively opposing organ and tissue donation and transplantation.

Each congregational clergy person is encouraged to research his or her religious group's tradition and position on organ and tissue donation and transplantation, as well as other biomedical ethical issues. In addition, each parish clergy person should keep abreast of any new resolutions or positions adopted at his or her religious group's national assembly. The group's position is subject to change in any given year. It is important to be informed, since the family member is suddenly faced with making a decision concerning organ and tissue donation of a loved one may be depending on the clergy to know the position held by his or her religious group. Inability to make an informed decision could leave the family member with a feeling of guilt regardless of the decision he or she may make.

The following summary statements concerning the various religious groups' positions on organ and tissue donation and transplantation may be of help to you. Perhaps you can help your religious group adopt a more clearly defined position. A pro-active position does, indeed, help clarify a group's attitude on the subject. Your knowledge and action may help alleviate the suffering of the thousands of people who die annually for lack of available donor organs and tissues while a multitude of healthy organs are being buried every day. This dilemma is within itself an ethical issue.

Summary Statement of Various Religious Groups

AME & AME Zion (African Methodist Episcopal)

Organ and tissue donation is viewed as an act of neighborly love and charity by these denominations. They encourage all members to support donation as a way of helping others.

AMISH

The Amish will consent to transplantation if they believe it is for the well-being of the transplant recipient. John Hostetler, world renowned authority on Amish religion and professor of anthropology at Temple University in Philadelphia, says in his book, Amish Society, "The Amish believe that since God created the human body, it is God who heals. However, nothing in the Amish understanding of the Bible forbids them from using modern medical services, including surgery, hospitalization, dental work, anesthesia, blood transfusions or immunizations."

ASSEMBLY OF GOD

The Church has no official policy regarding organ and tissue donation. The decision to donate is left up to the individual. Donation is highly supported by the denomination.

BAPTIST

Though Baptists generally believe that organ and tissue donation and transplantation are ultimately matters of personal conscience, the nation's largest protestant denomination, the Southern Baptist Convention, adopted a resolution in 1988 encouraging physicians to request organ donation in appropriate circumstances and to "encourage voluntarism regarding organ donations in the spirit of stewardship, compassion for the needs of others and alleviation suffering." Other Baptist groups have supported organ and tissue donation as an act of charity and leave the decision to donate up to the individual.

BRETHREN

While no official position has been taken by the Brethren denominations, according to Pasto Mike Smith, there is a consensus among the National Fellowship of Grace Brethren that organ and tissue donation and transplantation is a charitable act so long as it does not impede the life or hasten the death of the donor or does not come from an unborn child.

BUDDHISM

Buddhists believe that organ and tissue donation is a matter of individual conscience and place high value on acts of compassion. Reverend Gyomay Masao, president and founder of the Buddhist Temple of Chicago says, "We honor those people who donate their bodies and organs to the advancement of medical science and to saving lives." The importance of letting loved ones know your wishes is stressed.

CATHOLICISM

Catholics view organ/tissue donation as an act of charity and love. Transplants are morally and ethically acceptable to the Vatican. According to Father Leroy Wickowski, Director of the Office of Health Affairs of the Archdiocese of Chicago, "We encourage donation as an act of charity. It is something good that can result from tragedy and a way for families to find comfort by helping others." Pope John Paul II has stated, "The Catholic Church would promote the fact that there is a need for organ donors and that Christians should accept this as a 'challenge to their generosity and fraternal love' so long as ethical principles are followed."

CHRISTIAN CHURCH (DISCIPLES OF CHRIST)

The Christian Church encourages organ and tissue donation, stating that we were created for God's glory and for sharing God's love. A 1985 resolution, adopted by the General Assembly, encourages member of the Christian Church (Disciples of Christ) to enroll as organ donors and prayerfully support those who have received an organ transplant.

CHRISTIAN SCIENCE

The Church of Christ Scientist does not have a specific position regarding organ donation. According to the First Church of Christ Scientist in Boston, Christian Scientists normally rely on spiritual instead of medical means of healing. They are free, however to choose whatever form of medical treatment they desire – including a transplant. The question of organ and tissue donation is an individual decision.

EPISCOPAL

The Episcopal Church passed a resolution in 1982 that recognizes the life-giving benefits of organ, blood and tissue donation. All Christians are encouraged to become organ, blood and tissue donors “as part of their ministry to others in the name of Christ, who gave His life that we may have life in its fullness.”

GREEK ORTHODOX

According to Reverend Dr. Milton Efthimiou, Director of the Department of Church and Society of the Greek Orthodox Church of North and South America, “the Greek Orthodox Church is not opposed to organ donation as long as the organs and tissue in questions are used to better human life, i.e. for transplantation or for research that will lead to improvements in the treatment and prevention of disease.”

GYPSIES

Gypsies are a people of different ethnic groups without a formalized religion. They share common folk beliefs and tend to be opposed to organ donation. Their opposition is connected with their beliefs about the afterlife. Traditional belief contends that for one year after death the soul retraces its steps. Thus, the body must remain intact because the soul maintains its physical shape.

HINDUISM

According to the Hindu Temple Society of North America, Hindus are not prohibited by religious law from donating their organs. This act is an individual's decision. H.L. Trivedi, in *Transplantation Proceedings*, stated that, “Hindu mythology has stories in which the parts of the human body are used for the benefit of other humans and society. There is nothing in the Hindu religion indicating that parts of humans, dead or alive, cannot be used to alleviate the suffering of other humans.”

INDEPENDENT CONSERVATIVE EVANGELICAL

Generally, Evangelicals have no opposition to organ and tissue donation. Each church is autonomous and leaves the decision to donate up to the individual.

ISLAM

The religion of Islam believes in the principle of saving human lives. According to A. Sachedina in his *Transplantation Proceedings*' (1990) article, Islamic Views on Organ Transplantation, “the majority of the Muslim scholars belonging to various schools of Islamic law have invoked the principle of priority of saving human life and have permitted the organ transplant as a necessity of procure that noble end.

JEHOVAH'S WITNESSES

According to the Watch Tower Society, Jehovah's Witnesses believe donation is a matter of individual decision. Jehovah's Witnesses are often assumed to be opposed to donation because of their belief against blood transfusion. However, this merely means that all blood must be removed from the organs and tissues before being transplanted.

JUDAISM

All four branches of Judaism (Orthodox, Conservative, Reform and Reconstructionist) support and encourage donation. According to Orthodox Rabbi Moses Tendler, Chairman of the Biology Department of Yeshiva University in New York City and Chairman of the Bioethics Committee of the Rabbinical Council of America, "If one is in the position to donate an organ to save another's life, it's obligatory to do so, even if the donor never knows who the beneficiary will be. The basic principle of Jewish ethics – 'the infinite worth of the human being' – also includes donation of corneas, since eyesight restoration is considered a live-saving operation." In 1991, the Rabbinical Council of America (Orthodox) approved organ donations as permissible, and even required, from brain-dead patients. The Reform movement looks upon the transplant program favorably and Rabbi Richard Address, Director of the Union of American Hebrew Congregations Bio-Ethics Committee and Committee on Older Adults, states that "Judiaic Responsa materials provide a positive approach and by and large the North American Reform Jewish community approves of transplantation.

LUTHERAN

In 1984, the Lutheran Church in America passed a resolution stating that donation contributes to the well-being of humanity and can be "an expression of sacrificial love for a neighbor in need". They call on members to consider donating organs and to make any necessary family and legal arrangements, including the use of a signed donor card.

MENNONITE

Mennonites have no formal position on donation, but are not opposed to it. They believe the decision to donate is up to the individual and /or his or her family.

MORAVIAN

The Moravian Church has made no statement addressing organ and tissue donation or transplantation. Robert E. Sawyer, President, Provincial Elders Conference, Moravian Church of America, Southern Province, states, "There is nothing in our doctrine or policy that would prevent a Moravian pastor from assisting a family in making a decision to donate or not to donate an organ". It is, therefore, a matter of individual choice.

MORMAN (CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS)

The Church of Jesus Christ of Latter-Day Saints believes that the decision to donate is an individual one made in conjunction with family, medical personnel and prayer. They do not oppose donation.

PENTECOSTAL

Pentecostals believe that the decision to donate should be left up to the individual.

PRESBYTERIAN

Presbyterians encourage and support donation. They respect a person's right to make decisions regarding his or her own body.

SEVENTH-DAY ADVENTIST

Donation and transplantation are strongly encouraged by Seventh-Day Adventists. They have many transplant hospitals, including Loma Linda in California. Loma Linda specializes in pediatric heart transplantation.

SHINTO

IN Shinto, the dead body is considered to be impure and dangerous, and thus quite powerful. "In folk belief context, injuring a dead body is a serious crime....," according to E. Namihira in his article, *Shinto Concept Concerning the Dead Human Body*. "To this day it is difficult to obtain consent from bereaved families for organ donation or dissection for medical education or pathological anatomy the Japanese regard them all in the sense of injuring a dead body." Families are often concerned that they non injure the *itai*, the relationship between the dead person and the bereaved people.

SOCIETY OF FRIENDS (QUAKERS)

Organ and tissue donation is believed to be an individual decision. The Society of Friends does not have an official position on donation.

UNITARIAN UNIVERSALIST

Organ and tissue donation is widely supported by Unitarian Universalists. They view it as an act of love and selfless giving.

UNITED CHURCH OF CHRIST

Reverend Jay Lintner, Director, Washington Office of the United Church of Christ Office for Church in Society, states, "United Church of Christ people, churches and agencies are extremely and overwhelmingly supportive of organ sharing. The General Synod has never spoken to this issue because, in general, the Synod speaks on more controversial issues, and there is no controversy about organ sharing, just as there is no controversy, about blood donation in the denomination. While the General Synod has never spoken about blood donation, blood donation rooms have been set up at several General Synods. Similarly, any organized effort to get the General Synod delegates or individual churches to sign organ donation cards would meet with generally positive responses."

UNITED METHODIST

The United Methodist Church issued a policy statement regarding organ and tissue donation. In it, they state that, "The United Methodist Church recognizes the life-giving benefits of organ and tissue donation, and thereby encourage all Christians to become organ and tissue donors by signing and carrying cards or driver's licenses, attesting to their commitment of such organs upon their death, to those in need, as a part of their ministry to others in the name of Christ, who gave his life that we might have life in its fullness." A 1992 resolution states, "Donation is to be encouraged, assuming appropriate safeguards against hastening death and determination of death by reliable criteria." The resolution further states, "Pastoral-care persons should be willing to explore these options as a normal part of conversation with patients and their families.

Frequently Asked Questions Regarding Donation

Q: *Do wealthy people and celebrities get moved to the top of the waiting list faster than “regular” people?*

A: The organ allocation and distribution system is blind to wealth or social status. The waiting time to receive a transplant is governed by many factors, including blood type, length of time on the waiting list, severity of illness and other medical criteria. Factors such as race, gender, age, and income or celebrity status are never considered when determining who receives an organ.

Q: *Will donation mutilate my body?*

A: Donated organs are removed surgically. Donation should not disfigure the body or change the way it looks.

Q: *Will my family be charged or paid for my donation?*

A: Donation costs nothing for the donor's family or estate. Also, no one is paid for donating organs. It is a gift.

Q: *If I am in an accident and the hospital knows I have signed the donor registry; will the doctors try to save me?*

A: Donation takes place only after all efforts to save your life have been exhausted and death has been legally declared. The medical team treating you is completely separate from the transplant team.

Q: *Am I too old to be a donor?*

A: Organs may be donated from newborns on up. The general age limit for tissue donation is 70. At the time of death, ARORA staff will determine whether your organs are usable.

Q: *Does my religion support donation?*

A: All mainstream organized religions approve organ and tissue donation and consider it an act of love and charity.

Q: *What organs and tissue can be transplanted?*

A: Heart, liver, kidney, pancreas, lungs and intestines can be transplanted. Tissue that can be transplanted includes heart valves, skin, long bones, vessels and tendons and eyes.

Q: *If I have a history of medical illnesses, can you still use my organs?*

A: At the time of death, the ARORA Coordinator or Medical Director will review your medical and social histories to determine whether you are eligible to be a donor. With recent advances in transplantation, many more people than ever before can be donors.

Q: *Do I need to tell my family I want to be a donor or is it enough to have it written in my will?*

A: Telling your family now you want to be a donor is the best way to ensure your wishes will be carried out. By the time your will is read, it is too late to recover organs.

Q: *I've heard about someone who was heavily drugged, then awakens in a bathtub of ice to learn one of his kidneys was removed and sold on the black market. Is that true?*

A: That story has been widely circulated over the Internet. There is absolutely no evidence of such activity ever occurring in the U.S. or any other industrialized country. While the tale may sound credible, it has no basis in the reality of organ transplantation. Many people who hear the myth probably dismiss it, but it is possible that some believe it and decide against organ donation out of needless fear.

Transplantation Today

Kidney Transplantation

For patients with end-stage renal disease (ESRD) there are two available therapies: dialysis and transplantation. Currently, 200,000 people receive dialysis, and over 78,300 of these are potential recipients waiting for a kidney transplant. Over 800 of these patients are children, the remainder are young, middle-aged and older adults who are waiting for a chance to pursue a more normal life.

In Arkansas, there are almost 2,300 patients on dialysis and over 200 people are on the waiting list for a donor kidney. Renal transplants are performed at all three transplant centers in the state: The University Hospital, Baptist Medical Center, and Arkansas Children's Hospital.

Heart Transplantation

In the United States approximately half a million people die annually from heart disease. According to OPTN data, the majority of patients waiting for a heart transplant are male and suffer from cardiomyopathy that is untreatable with conventional surgeries.

On any given day, there are approximately 2,700 candidates throughout the country waiting for a heart transplant. Currently, Arkansas Children's Hospital and Baptist Medical Center perform heart transplants.

Liver Transplantation

Similar to heart transplantation, there has been an explosion in liver transplantation in the past few years. Because there is no artificial, mechanical means of sustaining liver function, the alternative for all liver transplant patients is certain death within weeks or months. Almost one-fourth of the patients awaiting transplants are children under the age of 13. New surgical procedures such as reduced-sized and split-liver transplants have greatly increased the number of children receiving a transplant.

Over half of the patients are hospitalized at the time of transplant, many in the ICU with fulminant liver failure. Today, approximately 17,000 patients are waiting for a liver transplant in the United States. There are about 20 patients here in Arkansas. Locally, liver transplants are performed at the University Medical Center.

Pancreas Transplantation

Pancreas transplants have taken the form of islet cell infusion into host tissue sites, whole pancreas grafting, or segmental pancreas grafting. More than two-

thirds of the procedures are performed simultaneously with a kidney transplant.

Today, over 1,600 potential recipients are on the waiting list for a pancreas and over 2,300 for a kidney/pancreas. Locally, kidney pancreas transplants are done at the University Medical Center, with a waitlist of about 10 people.

Heart-Lung Transplantation

Due to the delicate nature of lung tissue, combined heart/lung transplantation has been limited by donor supply and preservation techniques. The most common indications for heart/lung transplantation are primary pulmonary hypertension, Eisenmenger's syndrome and congenital heart disease. The procedure is also being extended to patients with cystic fibrosis and emphysema.

While the vast majority of heart recipients are middle-aged males, the majority of heart/lung recipients are young females. Currently, over 100 patients are waiting for a heart/lung transplant nationwide.

Lung Transplantation

Single lung transplantation was first performed in the 1960's. Transplantation entered a new era in the 1980's when the double-lung technique was added. Most recipients suffer from pulmonary fibrosis, alpha-1 antitrypsin deficiency, emphysema, and cystic fibrosis. Currently, over 2,200 patients are waiting for a lung transplant in the United States. There is no lung transplant center currently in Arkansas.

Small Bowel and Multivisceral Organ Transplantation

Potential recipients suffer from a variety of congenital, as well as acquired intestinal and/or liver disorders. These transplants are performed at very few centers throughout the United States. Currently, there are over 220 patients waiting for a small bowel or multivisceral organ transplant in the United States. There is no small bowel/multivisceral organ transplant center in Arkansas.

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Glossary of Terms

AEBL – Arkansas Eye Bank and Laboratory. AEBL and ARORA are separate agencies. However, the 2 agencies work cooperatively to evaluate donors and approach families for consent. Working together allows medical staff to fulfill all requirements for notification with one phone call.

APR – Approach Prior to Referral. Speaking with families about donation options before the referral phone call is made to determine eligibility is an APR.

CMS – Centers for Medicare and Medicaid Services.

FSC – An employee of ARORA, a Family Services Coordinator is a specifically trained RN, Chaplain or Social Worker educated in the most effect methods for approaching a family for donation, providing education and grief support to a family during the donation process and completing legal documentation of donor and family decisions.

IHC - In-House Coordinator is an ARORA employee whose office is located within a donor hospital. IHC are either a Family Services Coordinator or an Organ Procurement Coordinator.

OPC – An employee of ARORA, an Organ Procurement Coordinator is a highly trained critical care RN specializing in managing organ function of a brain dead patient to preserve donation opportunities and allocating organs.

OPO – Organ Procurement Organization. There are 58 OPOs throughout the United States. ARORA is an OPO; an Organ and Tissue Bank.