

Management of the Brain-Dead Organ Donor

IMAGINE Nursing Symposium

May 2023



Objectives

- Review the need for organ transplantation
- Review the management of the brain-dead donor
- Identify benefits of a Donor Care Suite

Why Organ Donation?

- Nationally, there are over 104,000 people waiting for a life saving organ transplant
- A new person is added to the national donor waiting list every 10 minutes



What is Brain Death?

Uniform Death Declaration Act

An individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of all functions of the entire brain, including the brainstem, is dead.

What is Brain Death?

Texas Health and Safety Code Section 671.001

*If artificial means of support preclude a determination that a person's spontaneous respiratory and circulatory functions have ceased, the person is dead when, in the announced opinion of a physician, according to ordinary standards of medical practice, **there is irreversible cessation of all spontaneous brain function.** Death occurs when the relevant functions cease.*

[HEALTH AND SAFETY CODE CHAPTER 671. DETERMINATION OF DEATH AND AUTOPSY REPORTS \(texas.gov\)](https://www.texas.gov/health-and-safety-code-chapter-671-determination-of-death-and-autopsy-reports)

How is Brain Death Determined?

- Varies by state and institution
- Pre-Requisites
 - Criteria must be present for at least 6 hours (adult)
 - Clinical or neuroimaging evidence of an acute CNS catastrophe that is compatible with clinical diagnosis of brain death
 - Exclusion of complicating medical conditions that may confound clinical assessment (electrolyte, acid-base, or endocrine disturbances)
 - Body temperature ≥ 35.5 C
 - Mean Arterial Pressure of at least 60 mm Hg
 - Potentially coma inducing medications- at least 4 half lives should lapse

How is Brain Death Determined?

- Clinical Criteria
 - Coma or Unresponsiveness
 - Absence of Brainstem Reflexes
 - Apnea Test

- Confirmatory Tests (optional)
 - CT Angiography
 - Cerebral Blood Flow
 - Transcranial Doppler
 - Electroencephalography
 - Somatosensory Evoked Potentials

Texas Health and Safety Code

Section 692A.001

Revised Uniform Anatomical Gift Act

Each hospital in this state shall enter into agreements or affiliations with procurement organizations for coordination of procurement and use of anatomical gifts.

Each hospital must have a protocol that ensures its maintenance of an effective donation system in order to maximize organ, tissue, and eye donation.

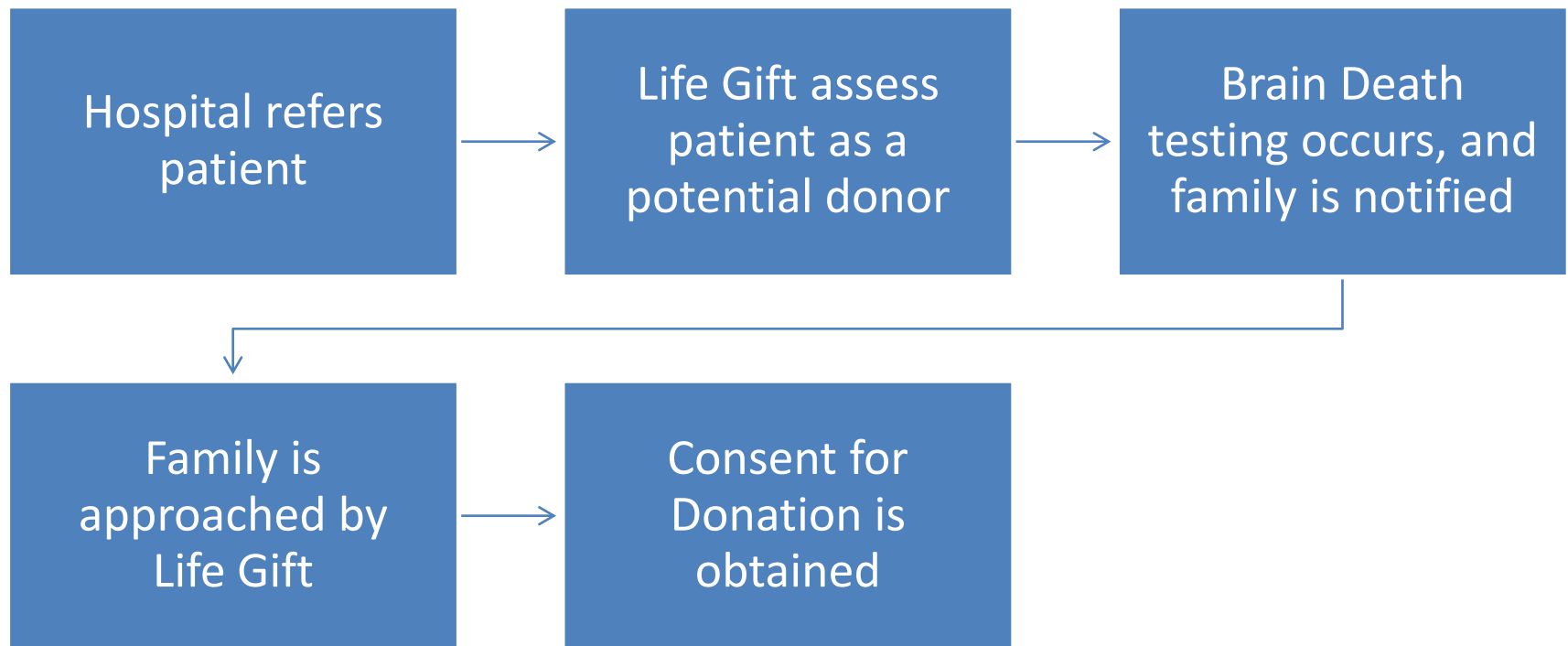
Brain Dead to Organ Donor

Clinical Triggers:

- GCS \leq 5
- Loss of one or more brainstem reflexes
- Any discussion of withdraw of life support

Hospital must call referral to Organ Procurement Organization (Life Gift) within ONE hour of clinical triggers being met

Brain Dead to Organ Donor



Donor Management Team

- Bedside RN
- Family Care Specialist
- Donation Care Specialist
- Unit Intensivist Team
- Respiratory Therapists
- Cardiac Cath Lab
- Operating Room Staff
- Guest Relations



Allocation Process

Patient is discharged from system and readmitted under new medical record number- FULL Code

Brain Death Pathway Orders are initiated

- LOTS of blood samples
- Echo, Cardiac cath, bronchoscopy
- Donor Management Goals

Life Gift staff work on allocating organs

Donor Management Goals

MAP 60-100 mmHg

CVP 4-10 mmHg

EF > 50%

Pressor ≤ 1 ; low dose

ABG pH 7.3-7.45

PaO₂ > 300 on challenge gas

Na 135- 160

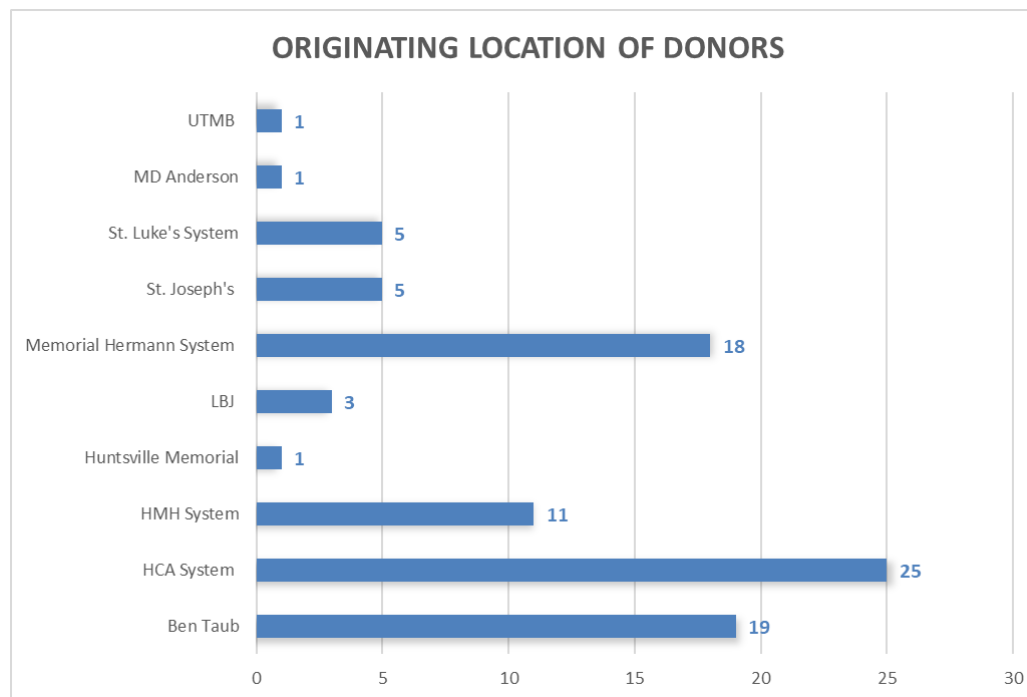
Glucose < 150

UOP 0.5-3ml/kg/hr

Goal: Meet at least 7 out of 9
DMGs prior to OR

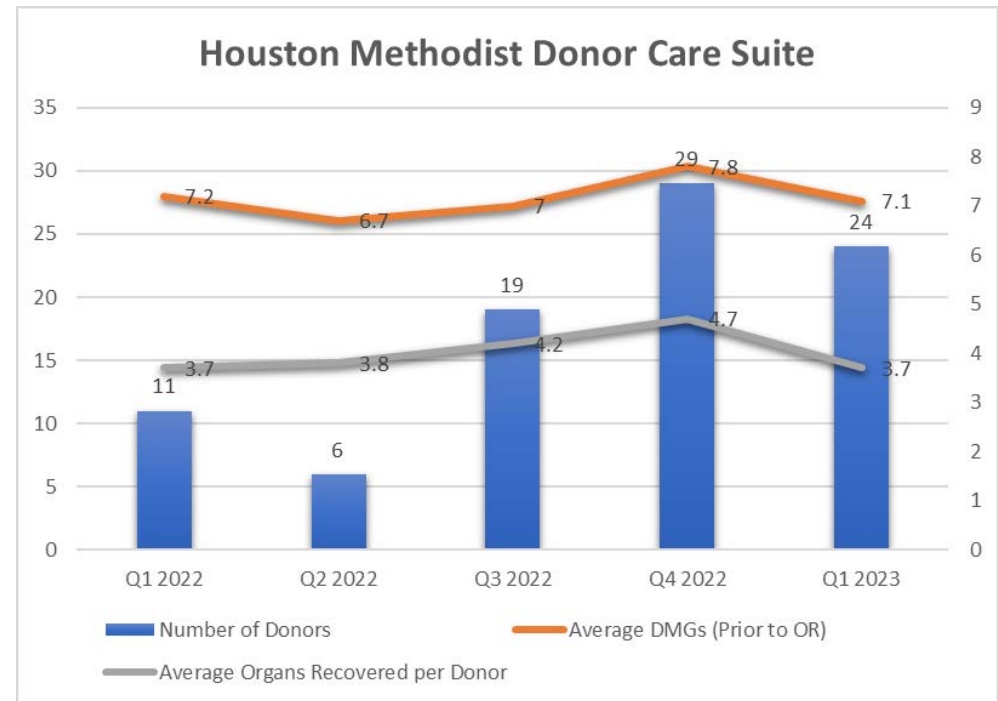
Donor Care Suite

- 4 Dedicated Neuro ICU beds on Walter Tower 11
 - Consented Brain Dead Organ Donors are transferred from the Houston Region, as well as internally

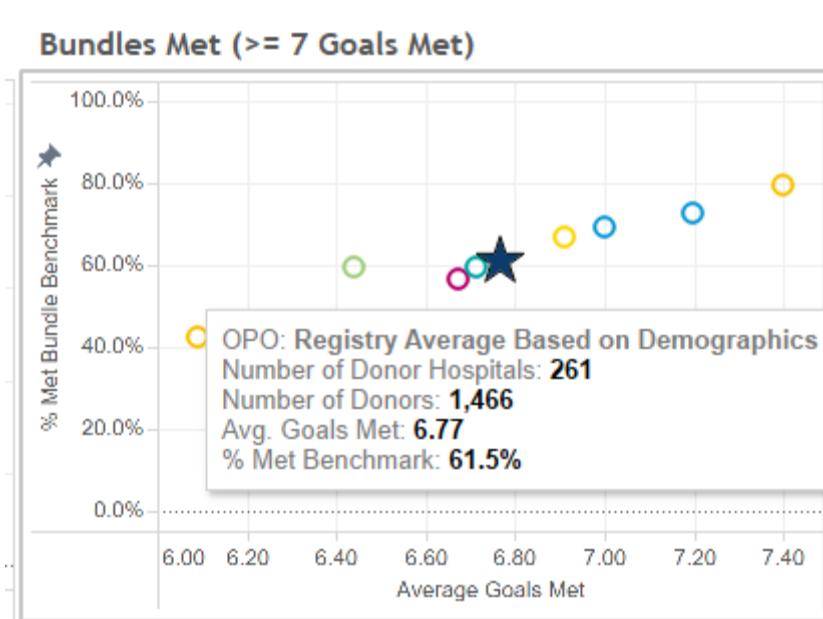


Donor Care Suite

- Why?
 - Organ donors who are cared for by trained staff have better outcomes
 - Higher average organs recovered per patient
 - Meet more DMGs prior to OR



Donor Care Suite Outcomes



National Average: 61.5 %
HMH DCS: 75.7 %

Donate Life!

Register online:

<https://www.donatelifetexas.org/>



References

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