

Ethical Considerations When Expanding Use of Living Liver Donations

Laura Madigan McCown, DBE, MSW, MTS, HEC-C

Clinical Ethicist, MaineHealth

ILDA, Maine Transplant Program

Assistant Professor of Medicine, Tufts University School of
Medicine



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Learning Objectives

Increase knowledge of bioethical principles

Increase knowledge of applying ethical methodology to expanding LLD

Identify ethical dimensions of expanding LLD



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Outline

- The state of LLD
- Review of bioethical considerations
- Identify Ethical Dimensions of expanding LLD
- Barriers to Living Liver Donation
- Strategies for Expanding LLD



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LLD: Overview (Braun et al., 2021)

In US <5% of all liver transplants from living donation

First LDLT chain in US 2017

Long-term physical, psychosocial, and economic outcomes for Non-Directed Liver Donors? **Unknown**



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Role of Ethics in Expanding Living Liver Donation: Communication

Identify obligations

Clarify risks

Guide process



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Overarching Thesis (Rudow & Robert 2003)

“Informed understanding and consent are crucial aspects of the evaluation and include ensuring that the donor understands all potential complications and is free of coercion. Safety of the donor must be the highest priority.”



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Obligations: Ethical Considerations in Surgery/Surgeon as Moral Agent



- “I rely on the team to make sure the donor is 100% all in, accepting of the risks and benefitting in a way meaningful to them. I need to know that donors are going beyond giving us permission... ***you guys[team] ensure that donors WILL this [donor surgery] to happen with their entire being***” MTP Surgeon



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Risks

- a right hepatectomy, carries a mortality rate of 0.5% and a morbidity rate of 20%
- this mortality rate is > 10 times that of a donor nephrectomy, which is around 0.03%



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LD Exclusion Criteria



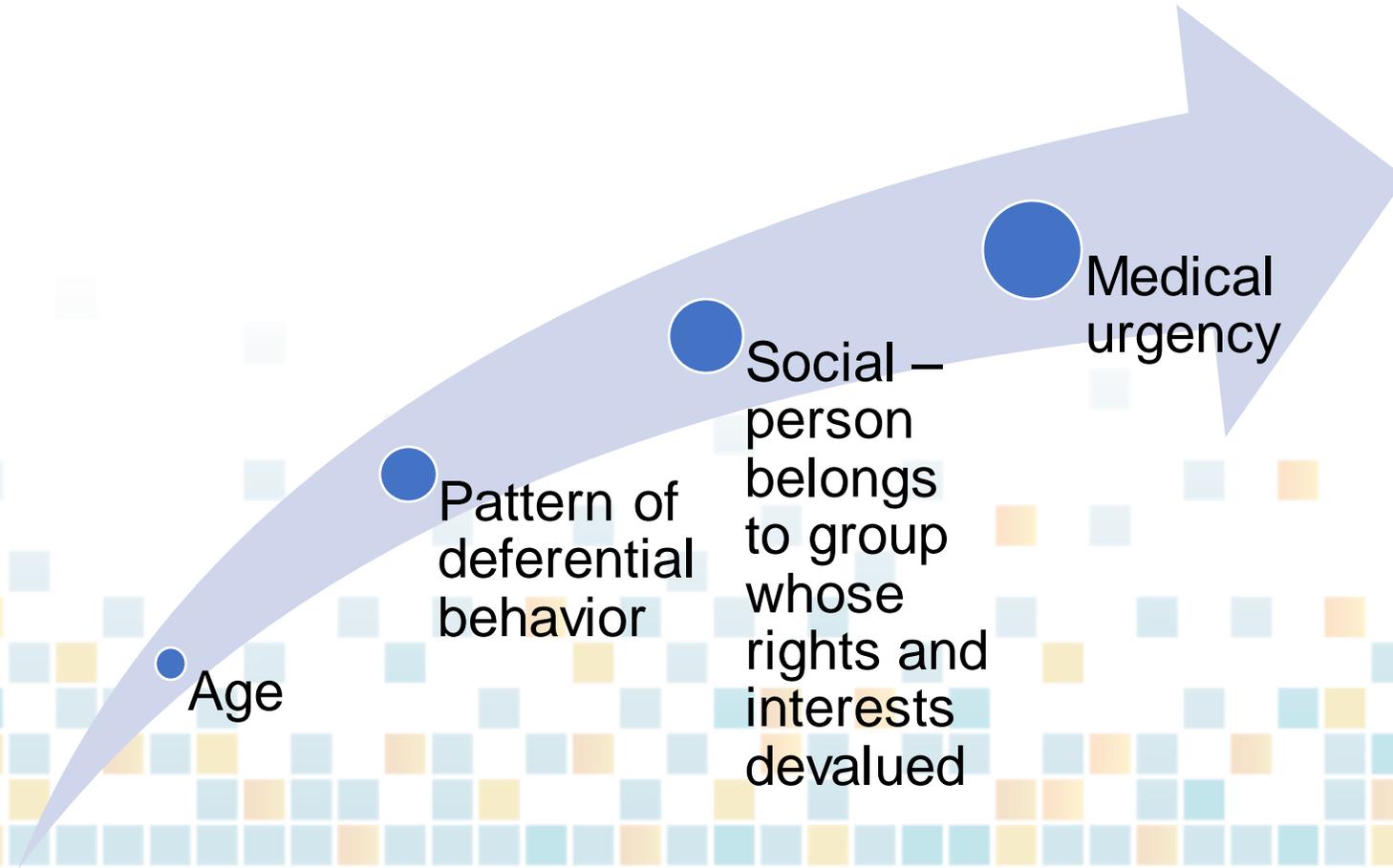
<h2>Undue Pressure/Inducement</h2>	<ul style="list-style-type: none">• persuading someone to donate by using incentives that distort a person's judgment
<h2>Exploitation</h2>	<ul style="list-style-type: none">• person who bears the risk is in a weaker or more vulnerable position and receives unequal benefits for the burdens undertaken; the recipient clearly benefits at the expense of the donor
<h2>Coercion</h2>	<ul style="list-style-type: none">• a threat that makes you worse off no matter which outcome you choose



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Vulnerability Considerations (Ross & Thistlethwaite 2018)



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BARRIERS to Expanding LLD



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Trust

(2019 National Survey of Organ Donation Attitudes and Practices: Report of Findings, HRSA, 2019)

N=10,000

The survey question showing the biggest decrease since 2012 was Q22B “doctors do everything to save a life before organ donation is considered” (91% in 2012 to 84% in 2019, $p < .0001$).



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Strategies

Strategies for Increasing Knowledge, Communication, and Access to Living Donor Transplantation: An Evidence Review to Inform Patient Education *Current Transplantation Report* 2018 Mar; 5(1): 27–44.

[Heather F. Hunt](#), JD,^{1,2} [James R. Rodrigue](#), PhD,^{1,3} [Mary Amanda Dew](#), PhD,^{1,4} [Randolph L. Schaffer](#), MD,^{1,5} [Macey L. Henderson](#), JD, PhD,^{1,6} [Randee Bloom](#), RN, PhD,¹ [Patrick Kacani](#),¹ [Pono Shim](#),¹ [Lee Bolton](#), MSN, ACNP,¹ [William Sanchez](#), MD,^{1,7} and [Krista L. Lentine](#), MD, PhD^{1,8}



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Overview of Strategies & Ethical Dimensions

(Hunt & Rodrigue et al., 2018)

- Education Programs
 - 19 studies
 - Relevant findings: **home-based education outreach more successful than clinic-based**
 - *House Calls intervention shown to eliminate initial racial disparity in LDKT (n=152)*

**+JUSTICE
- UNDUE
PRESSURE**



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Overview of Strategies & Ethical Dimensions

(Hunt & Rodrigue et al., 2018)

- Education Programs
 - **Live Donor Champion** N=15

**+JUSTICE & HARM
AVOIDANCE**

Friend or family trained as an advocate. Includes 'anti-coercion' training.

4 completed transplants

3 in evaluation

Control Group N=15 had none

-UNDUE PRESSURE



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Overview of Strategies & Ethical Dimensions

(Hunt & Rodrigue et al., 2018)

- **Social Media/Apps**
- N=54
- Social media/App users saw 7X as likely to have potential donor come forward 10 months later vs. control group

**+AUTONOMY, JUSTICE,
BENEFICENCE & HARM
AVOIDANCE**



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Additional LLD Expansion Opportunities



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Opportunities During Outreach

(Hunt & Rodrigue et al., 2018)

Be Transparent: There is risk

Living Organ donation violates
2 Bioethical Principles:

- Avoid Unnecessary Harm (nonmaleficence)
- Act in Patient's Best Interests (beneficence)

WHAT ABOUT BENEFITS?

- Psychosocial
- Spiritual/existential
- Increased health awareness
- Positive changes in health status as a result of donation



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Consider the “Non-ideal Donor”: Ethical Argument

Weightman, A.C., Coghlan, S. & Clayton, P.A. Respecting living kidney donor autonomy: an argument for liberalising living kidney donor acceptance criteria. *Monash Bioeth. Rev.* (2022). <https://doi.org/10.1007/s40592-022-00166-4>

“the magnitude of the harm [to donor] to be prevented does not outweigh the benefits to recipients to a degree that would permit the overruling of the non-ideal donor’s autonomy.”



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Expand Exchange Opportunities; Collect Non-directed LLD Outcome Data

Braun HJ, Torres AM, Louie F, Weinberg SD, Kang SM, Ascher NL, Roberts JP. “Expanding living donor liver transplantation: Report of first US living donor liver transplant chain.” *Am J Transplant*. 2021 Apr;21(4):1633-1636. doi: 10.1111/ajt.16396. Epub 2020 Dec 8. PMID: 33171017; PMCID: PMC8016700.



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Ensuring Robust Informed Consent in Paired Exchange

(Chan et al., 2010)

“an honest conversation regarding our genuine limitations in understanding quality of life after live donation are essential”

Donors should have mindset that 2 donors are necessary for related recipient to have LDLT opportunity



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A Robust Informed Consent: Case (Chan, S.C.,

Lo, C.M., Yong, B.H., Tsui, W.J.C., Ng, K.K.C. and Fan, S.T. (2010), Paired donor interchange to avoid ABO-incompatible living donor liver transplantation. *Liver Transpl*, 16: 478-481. <https://doi.org/10.1002/lt.21970>

LLD Paired Interchange: Asian Experience

Recipient 1: severe adhesions in the abdomen nearly rendered LDLT infeasible. If this had happened, the operation of his unrelated donor, but not that of his spouse (donor 1), who was to donate to unrelated recipient 2, should have been halted.



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Robust Informed Consent

Donor 1 was sympathetic to the critical condition of recipient 2 and ***would have been willing to undergo the donor operation even if her husband did not come through as she had already been accepted in the psychological workup.***



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Given what we know was this robust informed consent?

The 2 LDLT procedures were processed independently by the human organ transplant board. His spouse (donor 1) would still have undergone the donor operation, but her husband would have failed to be saved by LDLT.



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Ethical Take-Aways for Expanding LLD?

- **Robust informed consent** (increases trust)
- **Transparency**
- **Communication of unknowns/uncertainties**
- **Openness to non-ideal donors**

Disclose that directed liver donor morbidity and mortality generalizability to non-directed donors is unclear;

Communicate that 2 donors needed for successful liver transplant in paired donation



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Thank You!!

Discussion



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