Innovative Practice: Compliance
Contracts for Transplantation

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Transplant Eligibility Guidelines
Vary Among Centers

- Most transplant centers set defined criteria for each organ specialty.
- Criteria are based on many factors, including research, but outcomes drive each center to develop/modify their criteria.
- Transplant centers will have both absolute and relative contraindications for transplant eligibility.
Examples of Absolute and Relative Contraindications

Absolute Contraindications:
- Active Cancer
- AIDS

Relative Contraindications:
- Smoking
- BMI extremes
The Dietitian’s Role in Transplant Eligibility Guidelines

The transplant dietitian can play a role in:

1. Researching and recommending guidelines for transplant eligibility

2. Evaluating the transplant candidate for possible nutritional concerns that may impact graft and/or patient survival

3. Assisting the transplant candidate in achieving goal(s) set forth by the transplant team
Nutritional Guidelines for Transplant Eligibility

- Weight criteria: overweight/underweight
- A1c criteria
- Phosphorus control
- Overall compliance with dialysis regimen, medications, and diet/fluids
What does research tell us about these nutrition-related criteria?
Weight Criteria

- Obesity appears to be a protective factor for dialysis patients.
- Dialysis Outcomes and Practice Study (DOPPS):
  Dialysis pts with BMI >30 kg/m² had RR death = 0.77 compared to those with “normal” BMI 23-24.9 kg/m²

Leavey SF, et al., 2002 Nephrol Dial Transplant 16:2386
Studies evaluating BMI as a risk factor for transplantation are mixed.

- Large study (51,927 kidney transplant recipients from the USRDS database in 2000):
  
  - BMI $\geq 30$ and $\leq 20$-$22$ kg/m$^2$ is risk factor for adverse outcomes after transplantation

Meier-Kriesch H-U, et al., 2000 Transplantation 73:70
Weight Criteria

However, in another study:

Transplantation appeared to be a survival benefit for the obese dialysis patient until the BMI was >41 kg/m²

Posttransplant weight gain

- Do steroid-sparing immunosuppressive regimens translate into less post-transplant weight gain?

- Study showed: body weight/BMI increased after kidney transplant, regardless of steroid avoidance or withdrawal. (avg gain: 5+/ - 7 kg)

Elster, EA, et al, Clinical Transplant, 2008 (Epub ahead of print)
Weight Criteria--overweight

- At Methodist Hospital:
  - 35 BMI or less to begin formal evaluation
  - 30 BMI or less to be wait-listed (entered in the transplant computer base)
  - The dialysis RD can assist with diet counseling and reporting weights to the transplant center
How do we accomplish the goals we set for the patient?

- Transplant RD meets or contacts the patient and discusses goals and assists in developing a plan to reach that goal.
- Transplant RD contacts the dialysis dietitian for assistance in diet modification and monitoring of any parameters to document improvement.
February 5, 2007

AGREEMENT BETWEEN (patient name) AND
THE METHODIST HOSPITAL TRANSPLANT CENTER

I have been advised and understand that my overweight condition is a risk factor for kidney transplant surgery.
I understand that I need to keep my weight at XXX pounds (a BMI of 30 for my height and weight) or less, in order to be transplanted. I understand that I may not be transplanted until I attain and/or maintain my goal weight. I understand that if I am close to my goal weight and a donor organ becomes available for me, my transplant physicians will decide if I can be safely transplanted at that time.

I agree to have my weight recorded once a month at XXXXX Dialysis Center, at Ph# XXX-XXX. The dialysis center will report my monthly weight to the Kidney Transplant Coordinator by faxing the weight result to XXX-XXXX. I can have my weight faxed more often, if I desire to do so.

After I have met my weight goal, I need to continue to weigh in monthly and have my weight faxed monthly to demonstrate that I can keep my weight at or below XXX pounds.
I have discussed this plan with Linda Ulerich, RD, the dietitian for the Methodist Hospital Transplant Center, and I am aware that I can contact her at 317-962-9965 or 1-800-510-2725 at any time with questions or concerns related to this contract.

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Several studies indicate that the underweight or malnourished dialysis patient is at increased risk for morbidity and mortality after transplant.

Meier-Kriesche H-U, et al., 2002 Transplantation 73:70
Weight Criteria-Underweight

- At Methodist Hospital:
- BMI of 20 kg/m^2 or higher to be wait-listed for transplant.
- The dialysis RD can assist with diet counseling and reporting of weights.
- If patient is unable to gain weight in a reasonable amount of time, feeding tube placement may be necessary.
Weight Criteria - Underweight

- If a patient has a history of eating disorder, formal counseling may be mandated.
- Documentation of attendance at eating disorder clinic is usually mandated.
Weight Criteria-Underweight

- Final assessment of patient progress via the eating disorder clinic staff is essential
- Patients with eating disorders are high risk for:
  - Transplant complications
  - Graft loss
  - Relapse of eating disorder
Diabetes as a risk factor for Renal Transplantation

Diabetes mellitus is associated with macrovascular and microvascular complications that negatively impacts renal transplant graft survival, increases morbidity and mortality, and results in higher health care costs.
Diabetes and Transplantation

Pretransplant diabetics (DM) vs. pretransplant non diabetics (NoDM):

- DM had 37% more CV events vs. 9% NoDM
- DM had 70% five-year survival vs 93% NoDM
- CV disease: most common cause of death (61%) for DM vs. NoDM (26%)

Cosio FG, et al., 2008 Am J Transplant 8(3):593
Diabetes in Transplant

- Immunosuppressants can cause or worsen hyperglycemia
- Despite steroid minimization, tacrolimus can cause/worsen post-transplant diabetes

Webster AC, et al., 2005 BMJ 331(7520) 810
A1c Criteria

- A1c of 8.0 (avg. BG of 205) or greater is considered a relative risk for transplant at Methodist Hospital.
- Patients with A1c of 8.0 or greater are contacted by the transplant RD for further evaluation to assess needs/concerns.
- Dialysis RD is contacted to validate A1c concerns and to assist with diet counseling and reporting of A1c levels.
Weight and A1c Record Sheet

RECORD SHEET FOR WEIGHT AND A1C CONTRACT

Name of Person Being Weighed: __________________________________________

Goal Weight: ________________  Goal A1C: __________________________

Facility recording weights and A1C_________________________________________

PLEASE FAX RESULTS
TO:______________________________________________

FOR QUESTIONS, PLEASE CALL: Linda Ulerich, RD, at Ph# 317-962-8294.

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Phosphorus Control

K/DOQI Clinical Practice Guidelines for Bone Metabolism and Disease in CKD (#3):

In CKD stage 5, hemodialysis, or peritoneal dialysis patients, serum PO4 levels should be maintained between 3.5-5.5 mg/dL (evidence)

Phosphorus Control

- Poor control of PO4/PTH can be a risk factor for post-transplant complications.
- Tertiary hyperparathyroidism occurred in 39% of post-transplant patients and DM-type-1 significantly increased the risk.
- Parathyroidectomy was necessary in 22% of the patients with tertiary hyperparathyroidism.

Contracting for Phosphorus Control

- Utilize KDOQI guidelines as goal: PO4 level of 5.5 or less
- Some patients may benefit from 5.0 goal or less—if hx of DM or CAD
- Most patients admit to underuse of binders and/or excess phosphorus intake.
- Most patients display significant improvement in PO4 with contract
Other Concerns

If a transplant candidate has compliance issues, as detected by transplant social worker, RD, or transplant coordinator, a contract can be utilized to address these issues, ie:

- Fluid abuse/excessive interdialytic weight gains
- Poor compliance with diet, medications and/or dialysis sessions is strong indicator of poor compliance after transplant
Can the dialysis dietitian alert the transplant center about patient concerns?

- YES!!
- The dialysis dietitian knows her patients better than the transplant staff does!
- The dialysis dietitian can be the “instigator” of the process. Compliance concerns may not be easily detected by the transplant team.
- The dialysis dietitian and dialysis staff can assist the patient in reaching their goals.
In Conclusion

- Transplant candidates may have issues that need to be resolved before they can be eligible for transplant.
- The transplant team is involved in assisting the patient reach his/her goals, but ultimately:

THE EFFECTIVENESS LIES WITH THE DIALYSIS DIETITIAN!