Substance Use in Living Donation: When Does Use Become Abuse?

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Disclosures

- With regards to the following presentation, I have no relevant financial disclosures.

Objectives

- To provide an overview of the incidence of substance use disorders in the organ donor population.
- To identify the risk factors associated with substance use disorders in the organ donor population.
- To describe the course of substance use disorders in the organ donor population.
- To review the current guidelines for screening and evaluating organ donors with a history of substance use disorders.
- To highlight the importance of addressing substance use disorders in the organ donor population and provide recommendations for healthcare professionals to improve the care of organ donors with a history of substance use disorders.

Case

- 42 year old marijuana farmer wanting to donate a kidney to his wife. On evaluation he describes a legal history in his 20's for a DUI, reports abstinence now. Reports occasional cigar smoking, recreational THC use.

OPTN policy

14.1 Psychosocial Evaluation Requirements for Living Donors

14.1.A Living Donor Psychosocial Evaluation Requirements

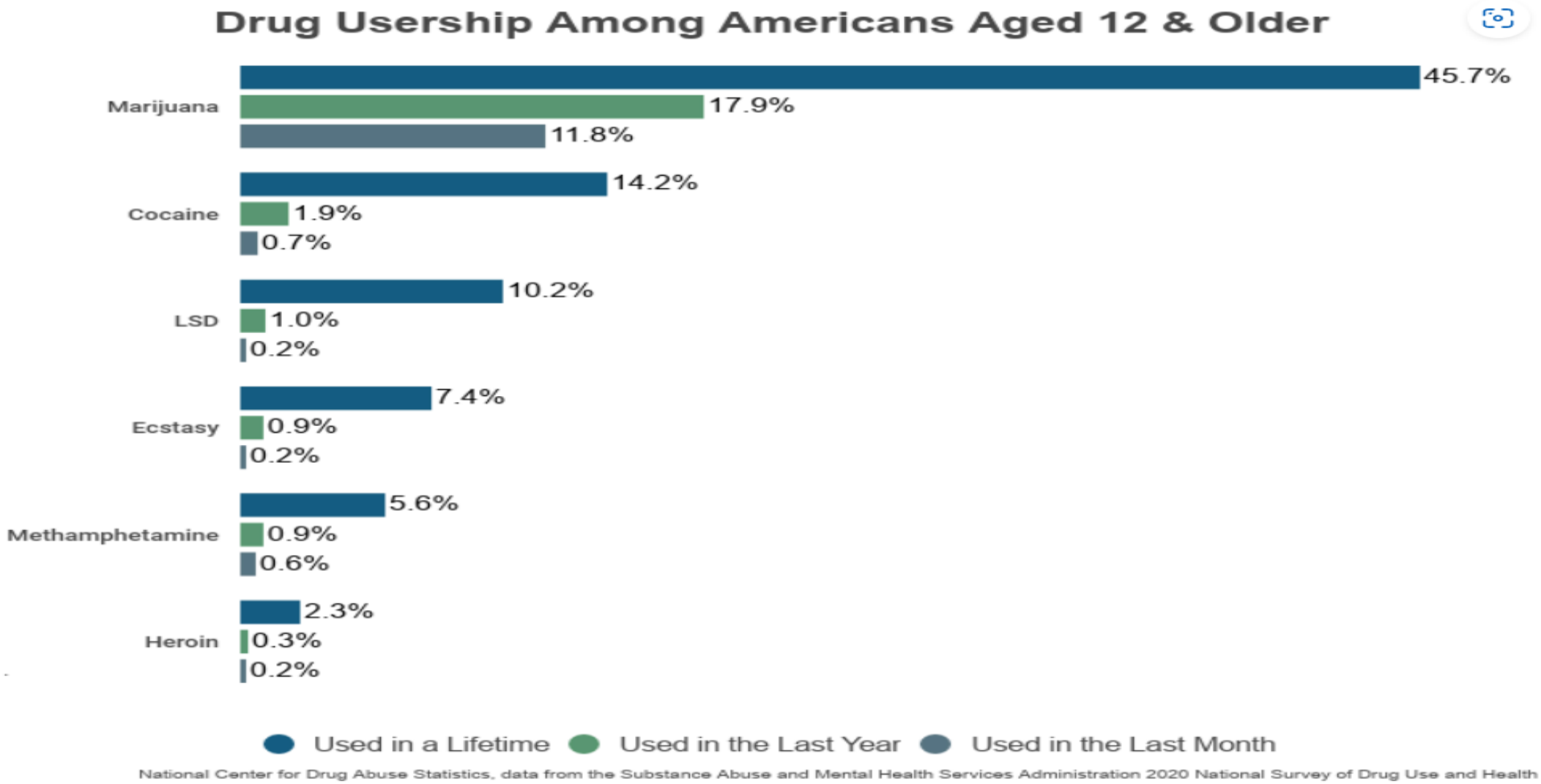
The living donor psychosocial evaluation must be performed by a psychiatrist, psychologist, masters prepared social worker, or licensed clinical social worker prior to organ recovery. Documentation of the psychosocial evaluation must be maintained in the living donor medical record and include *all* of the following components:

1. An evaluation for any psychosocial issues, including mental health issues, that might complicate the living donor's recovery and could be identified as risks for poor psychosocial outcome.
2. An assessment of risk criteria for acute HIV, HBV, and HCV infection according to the *U.S. Public Health Service (PHS) Guideline.*
3. A review of the living donor's history of smoking, alcohol, and drug use, including past or present substance abuse disorder.
4. The identification of factors that warrant educational or therapeutic intervention prior to the final donation decision.
5. The determination that the living donor understands the short and long-term medical and psychosocial risks for both the living donor and recipient associated with living donation.
6. An assessment of whether the decision to donate is free of inducement, coercion, and other undue pressure by exploring the reasons for donating and the nature of the relationship, if any, to the transplant candidate.
7. An assessment of the living donor's ability to make an informed decision and the ability to cope with the major surgery and related stress. This includes evaluating whether the donor has a realistic plan for donation and recovery, with social, emotional and financial support available as recommended.

The recovery hospital must:	These elements of informed consent :
	living donation, which may be temporary or permanent and include, but are not limited to, *all* of the following: a. Potential medical or surgical risks: i. Death ii. Scars, hernia, wound infection, blood clots, pneumonia, nerve injury, pain, fatigue, and other consequences typical of any surgical procedure iii. Abdominal symptoms such as bloating, nausea, and developing bowel obstruction iv. That the morbidity and mortality of the living donor may be impacted by age, obesity, hypertension, or other donor-specific pre-existing conditions b. Potential psychosocial risks: i. Problems with body image ii. Post-surgery depression or anxiety iii. Feelings of emotional distress or grief if the transplant recipient experiences any recurrent disease or if the transplant recipient dies iv. Changes to the living donor's lifestyle from donation c. Potential financial impacts:

- More than 70 percent of people in the United States reported having at least one drink in the last year, and over 10 percent of people over the age of 12 have used an illicit drug in the last month.
- According to the *Dietary Guidelines for Americans*,[1] adults of legal drinking age can choose not to drink, or to drink in moderation by limiting intake to 2 drinks or less in a day for men and 1 drink or less in a day for women, when alcohol is consumed.

Why do we care about substance use

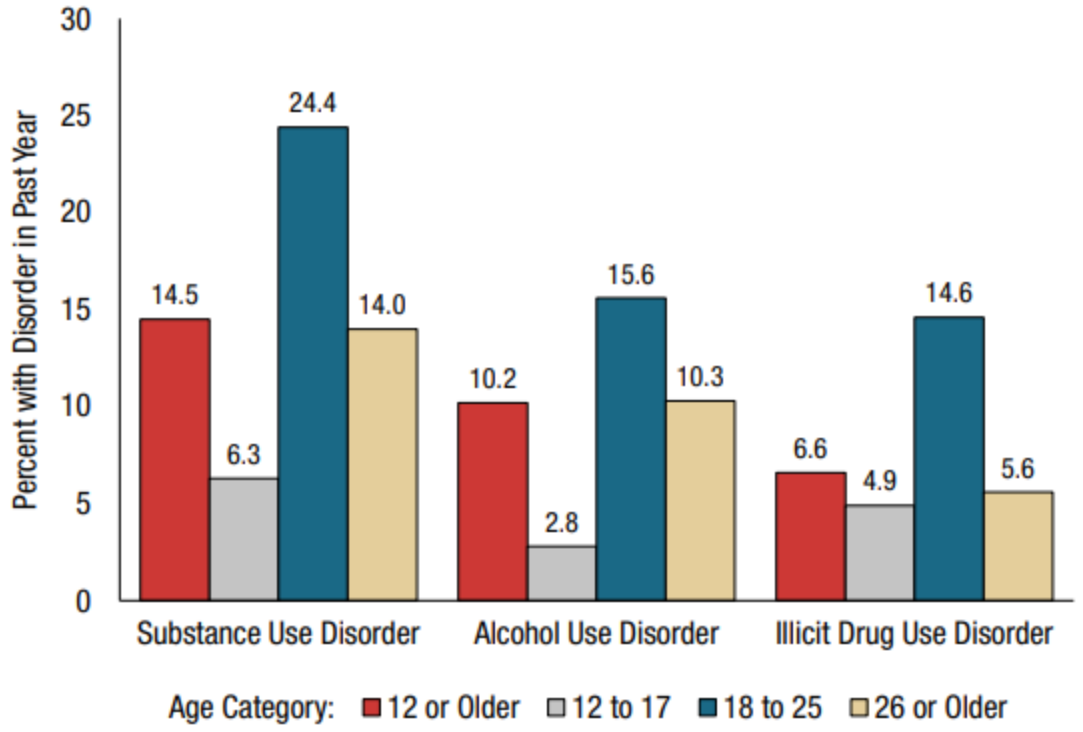


Substance use, abuse, dependence, disorder

	DSM–IV		DSM–5	
Any 1 = ALCOHOL ABUSE	Recurrent alcohol use resulting in a failure to fulfill major role obligations at work, school, or home (e.g., repeated absences or poor work performance related to alcohol use; alcohol-related absences, suspensions, or expulsions from school; neglect of children or household.	1	Alcohol is often taken in larger amounts or over a longer period than was intended. (See DSM–IV, criterion 7.)	The presence of at least 2 of these symptoms indicates an **Alcohol Use Disorder (AUD).** The severity of the AUD is defined as: **Mild:** The presence of 2 to 3 symptoms **Moderate:** The presence of 4 to 5 symptoms **Severe:** The presence of 6 or more symptoms
	Recurrent alcohol use in situations in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by alcohol abuse).	2	There is a persistent desire or unsuccessful efforts to cut down or control alcohol use. (See DSM–IV, criterion 8.)	
	Recurrent alcohol-related legal problems (e.g., arrests for alcohol-related disorderly conduct). ****This is not included in DSM–5****	3	A great deal of time is spent in activities necessary to obtain alcohol, use alcohol, or recover from its effects. (See DSM–IV, criterion 9.)	
	Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the alcohol (e.g., arguments with spouse about the consequences of intoxication, physical fights).	4	Craving, or a strong desire or urge to use alcohol. ****This is new to DSM–5****	
Any 3 = ALCOHOL DEPENDENCE	Tolerance, as defined by either of the following: a) A need for markedly increased amounts of alcohol to achieve intoxication or desired effect b) Markedly diminished effect with continued use of the same amount of alcohol	5	Recurrent alcohol use resulting in a failure to fulfill major role obligations at work, school, or home. (See DSM–IV, criterion 1.)	
	Withdrawal, as manifested by either of the following: a) The characteristic withdrawal syndrome for alcohol b) Alcohol is taken to relieve or avoid withdrawal symptoms	6	Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol. (See DSM–IV, criterion 4.)	
	Alcohol is often taken in larger amounts or over a longer period than was intended.	7	Important social, occupational, or recreational activities are given up or reduced because of alcohol use. (See DSM–IV, criterion 10.)	
	There is a persistent desire or unsuccessful efforts to cut down or control alcohol use.	8	Recurrent alcohol use in situations in which it is physically hazardous. (See DSM–IV, criterion 2.)	
	A great deal of time is spent in activities necessary to obtain alcohol (e.g., driving long distances), use alcohol, or recover from its effects.	9	Alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol. (See DSM–IV, criterion 11.)	
	Important social, occupational, or recreational activities are given up or reduced because of alcohol use.	10	Tolerance, as defined by either of the following: a) A need for markedly increased amounts of alcohol to achieve intoxication or desired effect b) A markedly diminished effect with continued use of the same amount of alcohol (See DSM–IV, criterion 5.)	
	Alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g., continued drinking despite recognition that an ulcer was made worse by alcohol consumption).	11	Withdrawal, as manifested by either of the following: a) The characteristic withdrawal syndrome for alcohol (refer to criteria A and B of the criteria set for alcohol withdrawal) b) Alcohol (or a closely related substance, such as a benzodiazepine) is taken to relieve or avoid withdrawal symptoms. (See DSM–IV, criterion 6.)	

American Psychiatric Association, 2013, DSM 5

Figure 26. Substance Use Disorder, Alcohol Use Disorder, and Illicit Drug Use Disorder in the Past Year: Among People Aged 12 or Older; 2020



SAMSHA.gov
2020 National Survey on Drug Use and Health

Substance use and the donor population

most programs will accept donor candidates if they have been abstinent from substance use for a sufficiently long period of time, as determined by a mental health professional. This approach has evolved since 2005, when programs would often rely on arbitrary abstinence periods of 6 or 12 months. However, in 2017, some programs (22%) still routinely exclude candidates with a history of substance abuse disorder. Loiselle, M. M., Gulin, S., Rose, T., Burker, E., Bolger, L., & Smith, P. (2021). The relationship between marijuana use and psychosocial variables in living kidney donor candidates. Clinical Transplantation, 35 (4), e14248. doi: 10.1111/ctr.14248

- 4 papers reported prevalence rates of substance use or alcohol use to be 0.5-8.4%.
- One paper found that the prevalence rate of alcohol use is higher among donors than the normal population.
- Donors with a history of drug use or chronic pain had higher rates of alcohol or substance use.
- These donors also tended to experience post-surgery complications, rehospitalization, or perceived insufficient attention post-surgery

•Garg, N., Lentine, K. L., Inker, L. A., Garg, A. X., Rodrigue, J. R., Segev, D. L., & Mandelbrot, D. A. (2020). Metabolic, cardiovascular, and substance use evaluation of living kidney donor candidates: US practices in 2017. American Journal of Transplantation, 20(12), 3390-3400

- Alcohol use disorder higher than the normative population in the A2ALL study (MA Dew 2018 0

- 147 donors (19%) had a current substance use disorder (SUD), with tobacco being the most common (13%), followed by alcohol (2%).
- Cannabis use disorder was 0.5%, while other SUDs or combinations (e.g. stimulants, opiates, sedatives) were 2%.
- Of donors with a current SUD, 117 had one SUD, 22 had two SUDs, three had three SUDs, and five had four SUDs.

Loiselle, M. M., Gulin, S., Rose, T., Burker, E., Bolger, L., & Smith, P. (2021). The relationship between marijuana use and psychosocial variables in living kidney donor candidates. Clinical Transplantation, 35(4), e14248. doi: 10.1111/ctr.14248

- Those with the highest level of pre-donation opioid use were more than twice as likely as nonusers to be readmitted within 90 days post-donation (6.8% vs 2.6%; adjusted odds ratio [aOR], 2.49; 95% CI 1.74 to 3.58)

- Lentine KL, Lam NN, Schnitzler MA, Hess GP, Kasiske BL, Xiao H, et al. Predonation Prescription Opioid Use: A Novel Risk Factor for Readmission After Living Kidney Donation. *Am J Transplant*. 2017. March;17(3):744–53

Substance Use and the donor population

Marijuana use was associated with lack of health insurance, legal history, lower education level, active and history of substance use disorder, active psychiatric disorder, history of multiple psychiatric diagnoses, and history of suicidality.

Marijuana users were also more likely to be young, male, unmarried, and less likely to be approved for donation by the multidisciplinary selection committee. This latter association persisted in multivariate models.

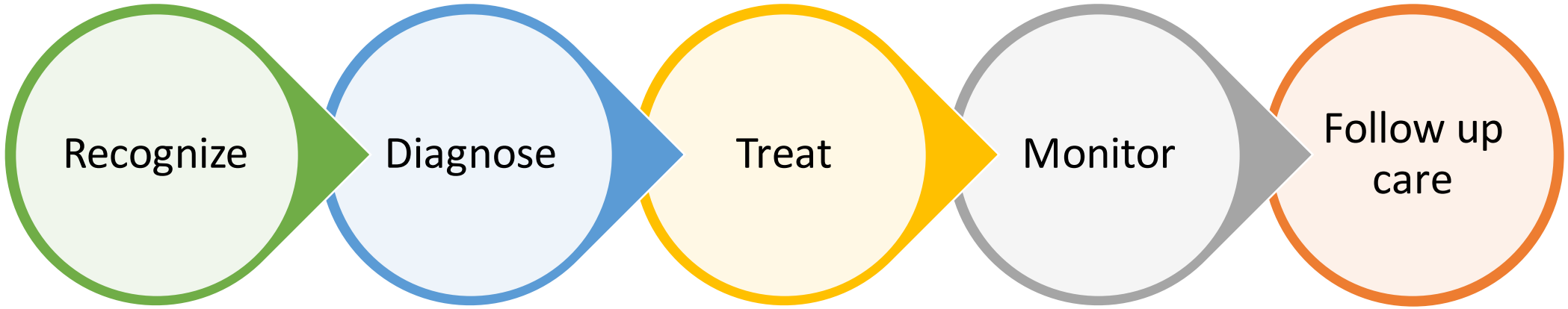
Overall, 263 donors (35%) reported a history of SUD, with tobacco being the most common (16%), followed by other SUDs or combinations (7%), alcohol (4%), and then marijuana (1%).

11% of donors (n=83) reported current use of licit controlled substances, with similar frequency distribution among types (opiate, benzodiazepine, stimulant, sedative/hypnotic/anxiolytic, and other).

Cigarette or marijuana smoking are infrequently criteria for exclusion, although 45% and 37% programs, respectively, require cessation 4 weeks prior to surgery

Loiselle, M. M., Gulin, S., Rose, T., Burker, E., Bolger, L., & Smith, P. (2021). The relationship between marijuana use and psychosocial variables in living kidney donor candidates. Clinical Transplantation, 35(4), e14248. doi: 10.1111/ctr.14248

Management of substance use disorders: Road Map



Choose evidence-based screening tools and assessment resource materials

Tool	Substance type		Patient age		How tool is administered	
	Alcohol	Drugs	Adults	Adolescents	Self-administered	Clinician-administered
Screens						
Screening to Brief Intervention (S2BI)	X	X		X	X	X
Brief Screener for Alcohol, Tobacco, and other Drugs (BSTAD)	X	X		X	X	X
Tobacco, Alcohol, Prescription medication, and other Substance use (TAPS)	X	X	X		X	X
Alcohol Screening and Brief Intervention for Youth: A Practitioner's Guide (NIAAA)	X			X		X
Opioid Risk Tool – OUD (ORT-OUD) Chart		X	X		X	
Assessments						
Tobacco, Alcohol, Prescription medication, and other Substance use (TAPS)	X	X	X		X	X
CRAFFT	X	X		X	X	X
Drug Abuse Screen Test (DAST-10)* *For use of this tool - please contact Dr. Harvey Skinner*		X	X		X	X
Drug Abuse Screen Test (DAST-20: Adolescent version)* *For use of this tool - please contact Dr. Harvey Skinner*		X		X	X	X
NIDA Drug Use Screening Tool (NMASSIST) *(discontinued in favor of TAPS screening above)*	X	X	X			X
Alcohol Screening and Brief Intervention for Youth: A Practitioner's Guide (NIAAA)	X			X		X
**Tools with associated fees*						

NIDA.NIH.gov

RISK FACTORS FOR DEPRESSION AND ANXIETY IN DONORS	DONOR FACTORS
Sociodemographic factors	- **Having greater financial burden** - **Being single**
Donor's physical health status	- **Actual health** - **Comorbid medical conditions eg obesity, hypertension** - **Poor outcomes post-surgery eg post-operative complications, persistent symptoms, longer duration of stay** - **Perceived health** - **Pre-surgical health related concerns** - **Perceived susceptibility to illness** - **Perceived negative health due to surgery** - **Actual and perceived poor physical or psychological outcomes in recipient's post-transplant**
Donor's psychosocial health	- **Psychiatric history of depression** - **Pre-donation mood disturbance**
Higher depression and anxiety were most often found to be correlated with:	- **Regret after donation** - **Poorer mental QOL** - **Poorer life satisfaction**
Protective factors against depression and anxiety	- **Available support system, including family support** - **Improved or maintained relationship with recipient**

Depression And Anxiety in Donors: Recipient Factors

Recipient death was one of the poor outcomes studied in several papers and was associated with increased risk of depression/anxiety in donors

Donors who experienced recipient death were predisposed to other negative psychological outcomes such as poor social functioning and poor quality of sleep

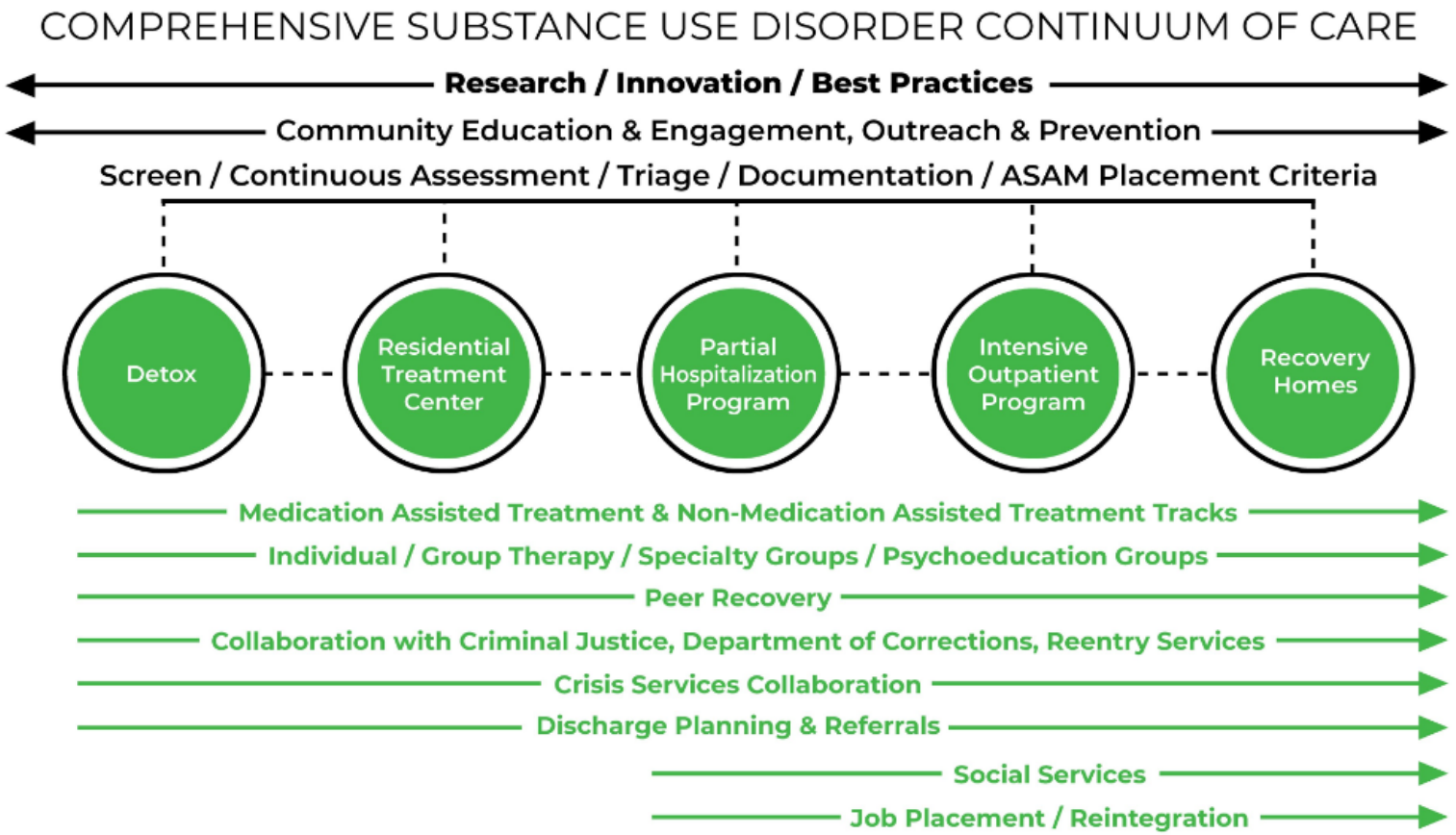
A study found that of donors reporting recipient death during the follow-up period, 33% felt guilty and 22% felt responsible for the recipient's death

Other poor outcomes in recipients associated with increased risk of depression/anxiety in donors include recipient graft loss, medical/surgical complications, and psychiatric disorders

Donor perception of recipient's health and functioning status also played a similar role

Ong JQL, Lim LJH, Ho RCM, Ho CSH. Depression, anxiety, and associated psychological outcomes in living organ transplant donors: A systematic review. Gen Hosp Psychiatry. 2021 May-Jun;70:51-75. doi: 10.1016/j.genhosppsych.2021.03.002. Epub 2021 Mar 6. PMID: 33721612.

Treatment


COMPREHENSIVE SUBSTANCE USE DISORDER CONTINUUM OF CARE
Research / Innovation / Best Practices
Community Education & Engagement, Outreach & Prevention
Screen / Continuous Assessment / Triage / Documentation / ASAM Placement Criteria
Detox
Residential Treatment Center
Partial Hospitalization Program
Intensive Outpatient Program
Recovery Homes
Medication Assisted Treatment & Non-Medication Assisted Treatment Tracks
Individual / Group Therapy / Specialty Groups / Psychoeducation Groups
Peer Recovery
Collaboration with Criminal Justice, Department of Corrections, Reentry Services
Crisis Services Collaboration
Discharge Planning & Referrals
Social Services
Job Placement / Reintegration

Questions

Session Survey

Filza Hussain, MD | April 19th 8:05 AM-9:00 AM