

FAST FACTS

CONTENT: MARCH 2022

TRANSPLANT LISTING AND ALLOCATION – ALCOHOL ABSTINENCE

INTRODUCTION

Advances in immunosuppressive drugs and the refinement of surgical techniques have allowed for greater success and broadened the use of liver transplantation in humans since its initial attempt in 1963. Over the past decade, liver transplantation has increased for alcohol-related liver diseases. The need for donated livers continues to far outstrip available supply, meaning organ donation and transplantation (ODT) programs must allocate resources and prioritize candidates. Such a resource-limited environment forces the ODT system to make difficult choices between recipients in need. Generally, waitlists will prioritize the sickest patients, but other factors, such as the time spent on the waitlist, are also considered. Another important factor is utility – which means that ODT systems seek to derive the greatest possible benefit from the scarce transplant opportunities, and so likely prognosis post-transplant is also relevant.

Alcohol Use and Liver Transplantation: Clinical Implications

Challenging the 6-month Abstinence Rule

What is Alcohol Use Disorder?

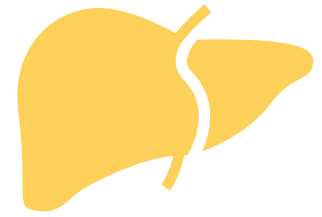
A Changing Landscape: The Trillium Gift of Life Pilot Project

Legal Challenges to the 6-month Abstinence Rule

Looking Ahead



ALCOHOL USE AND LIVER TRANSPLANTATION: CLINICAL IMPLICATIONS



Prior to receiving a transplant, potential candidates are put on an organ-specific waitlist such as the waitlist for liver transplant. Listing criteria can vary between liver transplantation programs.[1] Multiple factors can exclude candidates from liver waitlists, including alcohol use. Jurisdictions across Canada and the U.S. endorsed a 6-month abstinence rule for candidates in the 1990s, requiring individuals to abstain from any alcohol consumption for a 6-month period in order to be eligible for a liver transplant.

Two main rationales underpinned the initial use of the 6-month abstinence rule. First, it was believed that a period of abstinence might allow the damaged liver to recover, potentially negating the need for a liver transplant and its associated risks.[2] Second, a prolonged period of abstinence from alcohol pre-transplant was thought to decrease an individual's risk of returning to use post-transplant.[3]

CHALLENGING THE 6-MONTH ABSTINENCE RULE

The 6-month abstinence rule for liver transplants has been increasingly criticized in both medical and legal communities as candidates have been denied transplants or died during the abstinence period, culminating in several legal challenges.

The heightened contention surrounding the rule is largely attributed to changing perspectives on alcohol use disorder (AUD). Previously, the disease was viewed as a self-inflicted personal issue, but is now primarily seen as a medical illness that requires appropriate treatments and supports.



WHAT IS ALCOHOL USE DISORDER?

AUD is a psychiatric illness defined as alcohol use causing clinically significant impairment or distress, characterized by impaired control over drinking and ongoing drinking despite harmful consequences.[4] The Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5TM), classifies AUD as mild, moderate, or severe. Alcohol use impacts several motivational mechanisms in the brain and progresses from positive reinforcement to negative reinforcement.[5] Ongoing alcohol use causes dysregulation in the brain reward and stress systems.[6]



Alcohol use post-transplant can follow a variety of different pathways, including continued abstinence, the occasional lapse, a slow steady increase, or an early return to heavy drinking. Liver recipients who use alcohol post-transplant are more likely to demonstrate poor adherence to post-transplant treatment regimes, develop liver disorders such as steatosis or cirrhosis, or experience other health complications.[8]

A CHANGING LANDSCAPE: The Trillium Gift of Life Pilot Project

As of 2021, several jurisdictions in Canada have completely or partially abandoned the 6-month abstinence rule and established alternative listing criteria due to criticisms of the former rule. The Ontario Trillium Gift of Life Network launched a pilot program in 2017 as an alternative to the 6-month rule for waitlisting liver transplants for patients with alcoholic liver disease. The Ontario program assessed patients with AUD who did not meet the 6-month rule using a multifactorial set of criteria[9] that aimed to evaluate a patient's risk of relapse on a more individualized basis. In addition, patients then entered treatment for the underlying AUD including both pharmacological and psychotherapeutic therapies. Long-term monitoring for adherence to post-transplant therapies and AUD outcomes were provided, with immediate referral to treatment in the event of a relapse. The Ontario program was considered a success and became permanent in 2020, and the results of the pilot program were published in 2021.[10]

LEGAL CHALLENGES TO THE 6-MONTH ABSTINENCE RULE

In recent years, the 6-month abstinence rule has been subject to legal challenge. The lawsuits highlight the tension between the principles of utility (allocate organs for maximal medical benefit) and equality (ensure fair opportunities for liver transplantation without discrimination) in ODT programs. The lawsuits point out that alcohol use disorder is highly stigmatized and argue that the 6-month rule perpetuates disadvantage related to disability as well as race. They argue that the 6-month rule was not evidence-based and was therefore arbitrary and in violation of the *Canadian Charter of Rights and Freedoms*.^[11]

LOOKING AHEAD

ADDRESS STIGMA:



Efforts must be taken to continue to break down societal stigma surrounding AUD, especially conveying to the public how AUD is a chronic brain disorder. Public education and awareness campaigns are required in this area.^[12]

MINIMIZE REGIONAL INEQUALITIES:



National evidence-based guidelines and policies are needed to minimize regional inequalities and create cohesion across programs.^[13]

INCREASE ACCESSIBILITY OF SUBSTANCE USE TREATMENT:



Leverage new technologies and offer remote psychotherapy consultations to improve availability for all Canadian communities in a culturally safe manner.

At the time of writing of this document, the Canadian Liver Transplant Network and Canadian Blood Services are working toward a national consensus practice guideline on the topic of alcohol abstinence and waitlisting for liver transplantation.

ACKNOWLEDGEMENTS

This document was produced by Kaitlyn Wong, Amy Kallio, Prosanto Chaudhury, Susan Abbey, Alyssa Tomkins, Pascal Thibeault, Mélanie Dieudé, Jennifer Chandler, and the Canadian Donation Transplant Research Program (CDTRP) team.

The Canadian Donation and Transplantation Research Program (CDTRP) is a national research initiative designed to increase organ and tissue donation in Canada and enhance the survival and quality of life of Canadians who receive transplants.

The content of this document was created as part of the Key Policy Issues in Organ Donation & Transplantation virtual conference which took place on June 17–18, 2021 at the University of Ottawa, Ontario. [More info here.](#)



REFERENCES

- [1] Syed, A. et al. (2020). Assessment of Canadian Policies Regarding Liver Transplant Candidacy of People Who Use Alcohol, Tobacco, Cannabis, and Opiates. *Canadian Liver Journal*, 3(4) 372–80.
- [2] Greenberg, R. et al. (2021). Canadian Society of Transplantation White Paper: Ethical and Legal Considerations for Alcohol and Cannabis Use in Solid Organ Listing and Allocation. *Transplantation*, 105(9), 1957–64.
- [3] See above.
- [4] Spithoff, S. & Kahan, M. (2015). Clinical Review: Primary Care Management of Alcohol Use Disorder and At-risk Drinking: Part 2. *Can Fam Physician*, 61, 515–21 at 515.
- [5] Koob, G.F. & Volkow, N.D. (2016). Neurobiology of addiction: a neuropsychiatry analysis. *Lancet Psychiatry*, 3(8), 760–773.
- [6] See above.
- [7] See note 4.
- [8] Arab, J.P. et al. (2022). Management of alcohol use disorder in patients with cirrhosis in the setting of liver transplantation. *Nat Rev Gastroenterol Hepatol*, 19, 45–59.
- [9] Trillium Gift of Life Network. (2021). Ontario's Adult Referral and Listing Criteria for Liver Transplantation. https://www.giftoflife.on.ca/resources/pdf/Adult_Liver_TxRefList_Criteria_V5.0_EN.pdf
- [10] Carrique, L. et al. (2021). Results of early transplantation for alcohol-related cirrhosis: Integrated addiction treatment with low rate of relapse. *Gastroenterology*, 161(6), 1896–1906.e2.
- [11] Canadian Charter of Rights and Freedoms, Part I of the Constitution Act, 1982, Schedule B to the Canada Act 1982 (UK), 1982, c 11.
- [12] Tomkins, A. [University of Ottawa Centre for Health Law, Policy and Ethics]. (2021, July 5). The Alcohol Abstinence Rule and Liver Transplantation: The Applicability of the Human Rights Laws Under the Charter and Ontario Human Rights Code at 01h:23m:53s. [Video]. YouTube www.youtube.com/watch?v=nkhFHuQmF9E
- [13] Chaudhury, P. [University of Ottawa Centre for Health Law, Policy and Ethics]. (2021, July 5). Alcohol Use and Liver Transplantation: Clinical Implications at 00h:16m:33s. [Video]. YouTube www.youtube.com/watch?v=nkhFHuQmF9E