

# The Ethical approach of Performing Organ Transplantation on Patients with Psychotic Disorders: A Review

Damani Azzazie Lewis, Ausonya Ayana Henry

Anhui Medical University

## Abstract

This paper analyses the practice of often rejecting patients with psychotic disorders from organ transplantation. The paper reviews the details and available information regarding how psychotic disorders are incorporated into eligibility criteria at the national and institutional level which could cause medical dilemmas. We then review studies that examines the effects psychotic disorders on transplant outcomes. The evaluation as a potential transplant patient will include appointments with social workers, psychologists, and financial counselors. Evaluation is done for the ability to understand instructions and your treatment. Patients who have untreated psychiatric or mental disorders may be disqualified for treatment if the disorder prevents the patient from caring for themselves or suicidal occurrences. For example, a schizophrenic patient who is not taking medication and is having delusions would not be considered a good candidate for an organ transplant. Intellectual disability is not an automatic exclusion from receiving a transplant if there is a strong support system in place, but this varies from institution to institution where medical dilemmas could occur. The stress of waiting for a transplant can be difficult for families, and the social workers and psychologists will work to evaluate how well you and your loved ones will cope with the wait. This paper reviews the requirements of justice and argue that policies that preclude patients with and psychotic disorders from transplantation are medical dilemmas.

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## Introduction

Organ transplantation is one the most complex surgeries in medicine along with the fact that the organs are sometimes difficult to be sourced<sup>1</sup>. Thus a set of rules are determined by the medical institution to meet eligibility for recipients on a waiting list. This process begins at individual medical centers, where transplant teams decide which patients to place on the transplant waiting list. Each transplant center utilizes its own listing criteria to determine if a patient is eligible for transplantation<sup>1,2</sup>. These criteria have historically considered pre-existing affective and psychotic disorders to be relative or absolute contraindications to transplantation which means that the organ donated maybe wasted if the patient's quality of life is not improved or patient commits suicide due to mental illness which could give rise to a medical dilemma.<sup>1</sup> While attitudes within the field appear to be moving away from this practice, there is no data to confirm that eligibility criteria have changed<sup>1</sup>.

There are over 120,000 people listed on the national transplant waiting list in the United States each year. Less than one-third of these patients will receive a transplant by year-end and 22 people die on average each day<sup>2</sup>. Therefore as the demand for transplantation grows, the gap between organ supply and demand widens and patients face longer waiting periods. The scarcity of human organs presents many ethical dilemmas and requires the transplant community to make difficult allocation decisions. This process begins at individual medical centers, where transplant teams decide which patients to place on the transplant waiting list. Patients suffering from mental illness are often disqualified or are usually the last to receive an organ transplant thus raising many ethical issues such as stigma<sup>2</sup>.

In light of the data indicating that a history of psychiatric illness may impact a patient's placement on the transplant waiting list, it is important to investigate the impact of affective and psychotic disorders on transplant outcomes<sup>1-3</sup>. Because pretransplant psychosocial screenings seek to evaluate patients' readiness for transplantation, the inclusion of psychiatric characteristics in transplant eligibility criteria illustrates the belief that certain psychiatric patients experience increased post-transplant morbidity and mortality<sup>3</sup>. Psychiatric illness is thought to negatively impact transplant outcomes through a number of mechanisms, including: poor adherence to medication regimes, interpersonal difficulties that lead to poor social support, self-injurious behaviours, and drug-drug interactions between psychiatric and immunosuppressant medications. Given the limited supply of organs, these concerns may cause some transplant centers to exclude certain psychiatric patients from transplantation in favour of patients who are more likely to be successful recipients and responsible stewards of their new organs<sup>3</sup>. However, data about post-transplant outcomes of patients with affective and psychotic disorders illustrate that these psychiatric illnesses are not consistently associated with

increased morbidity and mortality. In what follows, peer-reviewed studies that both support and refute the association between psychiatric illness and poor transplant outcomes are examined. A number of recent studies suggest that mental disorders negatively impact the survival of transplant recipients<sup>3</sup>. The relationship between pretransplant psychiatric illness and post-transplant morbidity and mortality in patients undergoing cardiac transplantation was evaluated. A shortened survival time was associated with current depressive disorder, a history of suicide attempts, and a history of poor medical adherence. A history of suicide attempts was also strongly associated with decreased time to infection and organ rejection. Overall, current depression was one of the strongest predictors of reduced post-transplant survival, conferring a threefold increase in mortality. DiMartini and colleagues found a similar pattern amongst liver transplant recipients<sup>4</sup>. Their prospective study followed patients transplanted for alcoholic liver disease, and found that those with a history of depression were at increased risk of depression after transplantation. Early post-transplant depression subsequently served as the strongest predictor of long-term patient survival. A recent review article further supports the association between pretransplant depression and increased risk of post-transplant mortality in various solid organ transplants<sup>5</sup>.

Few studies examine the outcomes of patients with psychotic disorders after transplantation. The relatively low lifetime prevalence of psychotic disorders, which is approximately 3%, and the limited transplants performed on psychotic patients make longitudinal studies of this patient population difficult<sup>6</sup>. One report comes from Coffman and Crone, who surveyed transplant programs throughout the United States, Canada and Australia to collect data about transplant recipients with pretransplant psychotic disorders<sup>6</sup>. The survey yielded 35 cases at 12 transplant programs and included patients with schizophrenia, schizoaffective disorder, bipolar disorder, major depression with psychotic features, and psychotic disorder not otherwise specified. The authors found 13 of the 35 patients suffered from mania or psychotic episodes after transplantation, seven patients attempted suicide, and two patients completed suicide<sup>6</sup>. Both suicide attempts and completion were more common in patients who experienced psychotic symptoms during the year prior to transplantation. Approximately one quarter of patients exhibited medication noncompliance after surgery, resulting in rejection episodes in five patients and in reduced function or graft loss in four patients<sup>6</sup>. Of note, noncompliance with immunosuppressant drugs was highly correlated with living alone, homelessness, and time since last psychotic episode. More recent studies suggest that patients with psychotic disorders may be successful transplant recipients. Zimbrea and Emre (2017) conducted a retrospective review that examined the impact of preexisting psychotic disorders on transplant outcomes<sup>7</sup>. They identified ten patients with a history of psychosis who received solid organ transplants and found that all patients were adherent with medication regimens and outpatient appointments following transplantation. Four patients experienced one episode of organ rejection each, none of which were associated with an exacerbation of psychotic symptoms, medication noncompliance, or graft loss. Psychiatric complications after transplantation included psychotic episodes, depression, mania, and substance abuse. Four patients required one or more psychiatric hospitalizations, with a mean number of 0.42 per patient per year of follow-up<sup>7</sup>. No deaths occurred among the ten transplant recipients. Overall, the group showed no evidence of adverse medical events related to an exacerbation of psychotic symptoms. The authors hypothesized that the good outcomes seen in this study were influenced by the extensive psychiatric care offered to patients in the pretransplant and posttransplant settings. A number of case studies also demonstrate that patients with psychotic disorders may undergo successful transplantation if they receive the appropriate psychiatric and social support<sup>5-8</sup>. Le Melle and Entelis (2017) describe a heart transplant recipient with active schizophrenia who was compliant with immunosuppressant medications and follow-up appointments after transplantation<sup>8</sup>. The patient did not suffer from any significant medical or psychiatric complications. DiMartini and Twillman report a similar case in which a patient with schizophrenia exhibited medical compliance and psychiatric stability following liver transplantation<sup>9</sup>.

#### Ethical Evaluation of Psychiatric Patient

Various clinicians may argue that the stringency of establishing a standard for capacity in a single patient should be decided by the level of risk attendant to the result of the decision<sup>10</sup>. For example a mentally ill patient who is suicidal needs an organ transplant, the risks inherent with the decision to accept an organ and the patient's responsibility of caring for the organ after transplant are definitively great. Incapacity is likely to occur, but not definite, due to the patient's diagnosis as well as being suicidal. Based upon the likelihood for poor prognosis or the ineffective use of valuable and scarce medical resources, it could be argued that a patient's mental illness should at least require a formal capacity assessment, which may preclude them from making the decision. A term often confused with capacity is legal competency, which must be assessed by trained personnel within the legal system<sup>10</sup>. Decision-making capacity in these situations is determined clinically rather than with a legal approach. Thus, the physician must, based on their best clinical judgment, assess the patient's ability to

perform cognitive tasks and make a determination regarding the patient's decisional capacity. Although a number of guidelines are available to assist clinicians in assessing capacity, a formal guideline or best practice for assessment of decisional capacity has yet to be developed<sup>10</sup>.

#### Protocols in Decision Making for the Patient Transplantation

Following multidisciplinary evaluation of transplant candidates, sometimes the decision is made to wait in order to monitor one or more factors used in the final decision to list a patient for organ transplantation or to gather other information; these candidates are to be reconsidered for transplantation at a later time.<sup>10</sup> A final decision may be postponed for a number of reasons. The surgeons may decide to monitor the patient's mental status further for a number of reasons, including the decision to obtain a written plan from a psychiatrist for management of the patient's psychiatric symptoms post-transplantation, to further assess support system, or to enroll them in social and/or financial support programs as needed<sup>10</sup>. The American Medical Association (AMA) formally encourages transplant teams to intervene to overcome such obstacles to post-transplantation care whenever possible<sup>11</sup>. Current United Network for Organ Sharing (UNOS) criteria dictate that listed candidates are given priority based on medical urgency and time spent on the waiting list<sup>12</sup>. Thus, although it may be reasonable to await further evaluation of the mentally ill patient before making a decision, it is still important to proceed expeditiously.

The option of leaving a patient off the transplant list is against the principle of saving all lives no matter the cost<sup>12</sup>. This is based on the evaluation that severe psychiatric illness may complicate the post-transplantation course to such a degree that commitment to distributive justice which requires that organs be allocated to patients without these co-morbidities is an ethical dilemma. Awareness that psychosocial factors affect the survivability of organs post-transplant has been integrated into government regulation of transplant decisions<sup>13</sup>. The U.S. Department of Health and Human Services' Centers for Medicare & Medicaid Services (CMS) requires that every transplant candidate receive a comprehensive psychosocial evaluation<sup>14</sup>. To be reimbursed for transplant services, the facility must evaluate candidates "for issues that could affect the patient's compliance with the post-transplant treatment that is necessary to maximize the chances of a successful transplant, such as substance abuse or behavioural or psychiatric issues." Furthermore, federal law mandates transparency of outcome statistics, and CMS takes these data into account when determining re-approval of transplant centers<sup>14</sup>. This mandate creates an initiative for transplant programs to recruit the lowest-risk transplant candidates available, although professional organizations and transplant programs may also recognize complex candidates with mental illness may face in these situations. The American Association for the Study of Liver Diseases practice guidelines for the evaluation of liver transplant candidates note that "psychosocial issues tend to be the greatest deterrent to successful liver transplantation."<sup>15</sup> A survey of American transplant programs (72 liver, 217 kidney, and 127 cardiac transplant programs) found that schizophrenia, past or present suicidality, intellectual disability (defined as IQ <70 by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition), and substance abuse disorders all numbered among the contraindications to heart, liver, and kidney transplants<sup>1</sup>. Among all the programs surveyed, the rate of denying a transplant for psychosocial reasons alone was stated to be between 2.8 percent and 5.6 percent. Specifically, among surveyed liver transplant programs, the rate varied by site from 0 percent to 20 percent<sup>1</sup>.

#### Demand for Ethical Consideration in Transplantation

Different physicians have strong views that they should serve as the patient's advocate regardless of the potential for misallocation of scarce medical resources<sup>16</sup>. The World Medical Association's Statement on Human Organ Donation and Transplantation proposes that transplant physicians' ethical obligation to seek the well-being of their patients should usually be primary<sup>17</sup>. Physicians however should be careful that this ethical obligation does not lead to unethical and illegal tactics to get a patient transplanted<sup>13</sup>. In 2003, three Chicago, IL, medical centers were forced to settle lawsuits after an insider at one of the centers alleged irregularities, suggesting that physicians at the medical centers had intentionally misdiagnosed and hospitalized their patients to accelerate the process of receiving a transplant organ<sup>18</sup>.

Discussion about listing transplant candidates with mental disorders reached a public forum in 1995 with the case of Sandra Jensen. When Ms. Jensen was denied transplantation at two centers because she had a mental disability, a third-party physician argued that the decision violated the Americans with Mental Disabilities Act of 1990 (ADA). One team reversed its decision before legal action was filed, and Ms. Jensen received her transplant<sup>19</sup>. The decision launched a national discussion about the appropriateness of transplantation for patients with mental disabilities. Some argue that even using non-diagnosis-based criteria, such as a history of medication noncompliance, might violate the ADA if the behavior occurs more frequently in people with mental illness<sup>20</sup>. To date, UNOS has not provided ethical guidance to programs regarding the eligibility for transplant of people with mental illnesses or disabilities<sup>21</sup>. In the absence of guidelines from national transplant organizations,

the decision to provide a transplant organ to a patient with psychiatric illness therefore requires careful consideration of ethical principles in addition to a complete medical and psychosocial evaluation<sup>22</sup>.

### Summary

All transplant programs require a psychosocial evaluation prior to listing a patient. The evaluation, which can range from a one-time assessment by a member of the social work staff to a multisession, multidisciplinary process, usually involves both the patient and their family<sup>23</sup>. This broad participation enables clinicians to corroborate information through multiple sources and to assess the patient's presentation of the family situation. Decisions regarding transplant organ allocation rely on a two-step process. The first step involves the procurement of donor organs and the decision as to which transplant candidate will receive these organs. The U.S. Congress passed the National Organ Transplant Act of 1984 to create a national organ procurement and allocation organization known as the Organ Procurement Transplantation Network (OPTN) to carry out these duties.<sup>22</sup> United Network for Organ Sharing (UNOS) has contracted with the federal government since 1986 to administer the OPTN. Regional organ procurement organizations (OPOs) coordinate organ procurement and contract to allocate these organs to participating regional transplant hospitals<sup>22</sup>. Federal law mandates that both OPOs and transplant hospitals hold membership with the OPTN, which provides oversight of their transplant procedures and outcomes. Since 2000, the UNOS criteria that dictate organ allocation to listed candidates have been based primarily on medical urgency<sup>21</sup>. The second step regarding transplant organ allocation involves listing decisions made by multidisciplinary teams at transplant hospitals, such as the team described in the case studies. Each transplant hospital has a standard set of criteria that an interdisciplinary transplant team follows when making listing decisions for the transplant candidates that present to their hospital<sup>13</sup>. The variability of these criteria between transplant programs is well known, especially with regard to psychosocial criteria<sup>6</sup>.

The evaluation is designed to identify potential barriers to successful transplant. Active psychiatric illness is a modifiable risk factor for poor outcome in transplant<sup>23</sup>. If patients have an anxiety or affective disorder, it is often possible to treat them prior to transplant and to produce a meaningful remission of symptoms<sup>23</sup>. It is worth mentioning, however, that the available evidence suggests that long-standing anxiety or affective disorders do not predict worse outcomes after transplant<sup>20</sup>. Conditions that are chronic, such as schizophrenia, may be more difficult to put into remission, but thorough evaluation of the patient's history and compliance with treatment may lead to judicious selection of some such patients with possibly good outcomes<sup>20, 9</sup>. Intensifying treatment for patients with severe, chronic mental illness can often improve their compliance and assist them with required tasks such as smoking cessation (which might involve an inpatient hospital stay or intensive outpatient services)<sup>24</sup>. Mental disorders, when severe, are deemed by many programs to be a contraindication to transplant<sup>5</sup>. A single evaluation may be ineffective when trying to assess a personality disorder, and crisis situations (such as an acetaminophen overdose leading to acute liver failure and the need for urgent transplant) may also impede a comprehensive evaluation<sup>23, 15</sup>. In such circumstances, past medical and psychiatric records may be the only way to decide about a patient's ability to work with the transplant team<sup>23</sup>. Therefore, decisions about listing patients with psychiatric illnesses should be largely evidence based so that the biases of team members are minimized and patients are given every opportunity to have access to transplant<sup>23</sup>. The presence of a psychiatric disorder is almost never an absolute contraindication to transplant; it must be considered in the context of numerous other factors when making decisions about listing patients<sup>24</sup>.

### Conclusion

Transplant eligibility criteria that exclude patient's psychotic disorders from transplantation on the basis on their psychiatric diagnosis alone are decidedly unjust and against the code of saving all lives no matter the cost. This practice penalizes patients for their association with a diagnostic category and discourages transplant providers from considering patient-specific behaviours and characteristics that contribute to transplant outcomes. The limited data available on the attitudes of medical professionals currently demonstrates that psychiatric diagnoses remain some of the most controversial characteristics impacting a patient's eligibility for transplantation. Given the uncertainty surrounding current practices, this review was aimed to provide a comprehensive, empirically informed ethical argument in the debate of the inclusion of patients with psychotic disorders on transplant waiting lists.

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