Marijuana use is common, and attitudes toward consumption have changed markedly during the past 2 decades. In the United States, marijuana use is illegal under federal law, but 23 states and the District of Columbia have passed legislation legalizing marijuana consumption for medical or recreational use. See Editorial by Allen and Ambardekar

Marijuana use has been considered a contraindication or relative contraindication for solid organ transplant listing at many centers, but practice patterns vary. Some centers approach frequent marijuana use differently than casual use and recreational marijuana differently than medical use. The issue of listing active marijuana users for solid organ transplant is often debated at transplant committee meetings and has been the subject of debate at academic conferences. The issue of whether patients who use marijuana should be eligible for transplant listing is widely covered in the media and is part of public discourse. Seven states have current laws that prohibit transplant centers from denying transplant listing based solely on a patient’s use of medical marijuana, and a similar bill was recently passed in the California legislature. There is no consensus within the transplant community about whether patients who actively use marijuana should be eligible for transplant listing. Investigators have described adverse events potentially related to marijuana consumption after organ transplantation, but there is a paucity of data on the outcomes of patients who used marijuana before transplant or safety data for marijuana use after transplantation.

To assess current practice patterns and attitudes toward marijuana use in their patients, we conducted an anonymous, web-based survey of healthcare providers in the heart and lung transplant community.

Methods

We conducted a confidential, independent, voluntary, electronic web-based survey of heart and lung transplant providers to assess current practice patterns and attitudes toward marijuana use in patients with advanced heart failure being considered for transplant. A total of 360 heart transplant providers responded from 26 countries. Nearly two thirds of respondents (n=222, 64.4%) supported listing patients with advanced, end-stage heart failure for transplant who use legal medical marijuana. Significantly, fewer respondents (n=96, 27.5%) supported transplant listing for patients using legal recreational marijuana. The majority of providers currently make patients eligible for transplantation after a period of abstinence from marijuana (n=241, 68.3%). There were no differences between the proportion of respondents supporting transplant listing after stratification by profession or country/region. Most (78.4%) survey respondents from states with laws prohibiting marijuana-using patients from being denied transplant listing reported denying all marijuana-using patients or mandating abstinence before transplant listing.

Conclusions—The majority of heart and lung transplant providers in our study sample supports the listing of patients who use medical marijuana for transplant after a period of abstinence. Communication and collaboration between the medical community and legislative groups about marijuana use in transplant candidates is needed to ensure the best patient outcomes with the use of scarce donor organs. (Circ Heart Fail. 2016;9:e002851. DOI: 10.1161/CIRCHEARTFAILURE.115.002851.)

Key Words: attitude ■ heart failure ■ heart transplant ■ marijuana ■ transplantation
Institutional Review Board reviewed and approved the survey before its distribution. Providers in our database were sent an email message inviting them to participate in the survey and a reminder message 3 weeks later. The questionnaire was developed using Survey Gizmo web-based survey software; participants accessed the survey using a web link provided in the email invitation (http://www.surveygizmo.com/s3/1962756/Marijuana-Attitudes-Among-Heart-Transplant-Providers). The survey software uses web cookies to prohibit respondents from filling out the survey multiple times from the same device. No login information was required to access the survey; we did not prohibit participants from forwarding the survey invitation to colleagues.

The survey contained 15 questions, all multiple choice (Figure). None of the questions were mandatory; the survey could be submitted without completing all of the questions. All responses were anonymous, but the survey did ask general demographic information.

Individual responses were downloaded from the survey Web site on April 5, 2015. The data were analyzed using Microsoft Excel. We calculated 95% confidence intervals (CIs) for the response proportions assuming a normal distribution.

Results

The survey was sent to 1651 email addresses; we received 360 responses, a response rate of 21.8%. The majority of respondents were from the United States (n=275, 78.6% (95% CI, 74.3–82.9; Table 1), but we received responses from 26 countries and 161 cities. Respondents primarily self-identified as physicians (n=214; 61.0%; 95% CI, 55.9–66.1), but a substantial proportion of surgeons (n=52; 14.8%; 95% CI, 11.1–18.5) and nurses or transplant coordinators (n=74; 21.1%; 95% CI, 16.8–25.3) responded to the survey. Slightly more than half (56.3%) of the respondents were from states or regions where marijuana is illegal, 34.9% were from states/regions where medical marijuana is currently legal, and 8.8% were from states where marijuana is legal for recreation.

The survey assessed respondents’ current practice and their opinion of best practices toward patients with advanced heart failure being considered for transplantation (Table 1). Nearly 1 in 5 respondents (19.8%) reported that their program currently denies all patients who use marijuana for transplant listing. A smaller proportion of respondents (7.4%) opined that denying all patients using marijuana was a best practice. Conversely, when compared with current practice, a higher proportion of respondents reported that the best practice would be to list patients for transplant immediately on a case-by-case basis (11.9% versus 30.6%, P<0.05). The most common current practice in the community is to make patients eligible for transplantation after a period of abstinence from marijuana (68.3%). Transplant listing after abstinence was also the most common opinion of best practice (62.0%).

The majority of respondents stated that patients with advanced, end-stage heart failure who use legal medical marijuana should be eligible for transplant listing (64.4%). This proportion was similar to the number of respondents who felt patients using opiates for chronic pain should be eligible for transplant listing (62.7%) but lower than the proportion that supported transplant listing for patients using Marinol for cardiac cachexia (82.8%). By contrast, significantly fewer respondents (27.5%) supported transplant listing for patients using legal recreational marijuana. Even fewer respondents supported listing patients for transplant listing if they use marijuana in a state where it is illegal (17.3%).

Most respondents thought that marijuana use was physically harmful (n=228; 65.7%; 95% CI, 60.7–70.7). Those
respondents who felt marijuana was physically harmful when compared with respondents who replied marijuana is not harmful were less likely to support listing patients for transplant in all contexts (legal medical marijuana, 52.0% versus 88.1%; legal recreational marijuana, 16.0% versus 50.4%; daily medical marijuana, 40.7% versus 75.6%; illegal marijuana, 8.5% versus 34.8%; and Marinol, 78.7% versus 34.8%; \( P \) value for all comparisons <0.05; Table 2).

Similarly, respondents who currently deny all patients using marijuana were less likely to support listing than respondents who consider transplant listing immediately on a case-by-case basis (legal medical marijuana, 55.5% versus 74.1%; daily medical marijuana, 29.4% versus 85.0%; and Marinol, 50.0% versus 85.0%; \( P \) value for all comparisons <0.05; Table 2).

There were no differences between the proportion of respondents supporting transplant listing after stratification by profession or country/region (Tables 1 and 2). Survey participants in the youngest age group, aged 20 to 39 years, when compared with respondents aged 40 to 59 years were more likely to support transplant listing for patients using medical marijuana (78.5% versus 56.2%, \( P < 0.05 \)), daily medical marijuana (63.6% versus 47.2%), and Marinol (93.5% versus 78.3%). Those in the youngest age group were also less likely to think marijuana use is physically harmful when compared with the older age groups (51.9% versus 72.2%, \( P < 0.05 \)). Support for transplant listing in respondents aged \( \geq 60 \) years did not significantly differ from the proportion of respondents supporting transplant listing in either the 20 to 39 or 40 to 59 age groups, but their support for transplant listing tended to be lower than the 20 to 39 age group and higher than the 40 to 59 age group.

Whether marijuana was legal in a respondent’s home state had little impact on their support for transplant listing in most scenarios. However, survey participants from states with legal recreational marijuana were less likely than respondents from states with legal medical marijuana to support transplant listing for patients using legal medical marijuana (78.5% versus 56.2%, \( P < 0.05 \)), daily medical marijuana (63.6% versus 47.2%), and Marinol (93.5% versus 78.3%).
Heart transplantation improves mortality in appropriately selected patients with advanced heart failure. Unfortunately, the number of patients who could be helped with transplantation far exceeds the number of available donors and transplant listing committees are forced to select patients based on criteria derived from past data, society guidelines, and community consensus. Substance abuse has long been considered a contraindication to heart transplant because marijuana use violates current federal laws, some illicit drugs have well-documented ill effects on the heart, and because of a belief that patients who abuse substances will have poor compliance after transplantation. Now that marijuana has been legalized in some states for purported medicinal uses, societal norms have changed, states are legislating this issue. Therefore, an assessment of the transplant community's attitudes about marijuana use by patients was needed to help establish and understand current practice patterns.

This is the most comprehensive survey of attitudes toward patients' marijuana use in the solid organ transplant community. The data add to smaller surveys that have assessed transplant community's attitudes about marijuana use. The data also add to the literature that suggests that marijuana use is detrimental to heart health. The results of this survey can be used to guide transplant center policies and to inform future research on marijuana use and heart disease.

### Table 2. Percentage of Respondents Answering Yes to Question Assessing Whether Patient Should be Listed for Heart Transplant

<table>
<thead>
<tr>
<th></th>
<th>All data</th>
<th>Medical Marijuana*</th>
<th>Recreational Marijuana†</th>
<th>Illegal Marijuana‡</th>
<th>Legal Medical Marijuana Daily§</th>
<th>Chronic Opiates#</th>
<th>Marijuana Harmful**</th>
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<tbody>
<tr>
<td>n</td>
<td>360</td>
<td>64.35</td>
<td>27.51</td>
<td>17.34</td>
<td>52.60</td>
<td>18.39</td>
<td>82.78</td>
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<td>Age, y</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>&lt;39</td>
<td>109</td>
<td>78.50</td>
<td>32.11</td>
<td>21.10</td>
<td>63.55</td>
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<td>40–59</td>
<td>198</td>
<td>56.19</td>
<td>23.71</td>
<td>14.43</td>
<td>47.15</td>
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<tr>
<td>&gt;60</td>
<td>45</td>
<td>65.12</td>
<td>31.11</td>
<td>19.05</td>
<td>48.89</td>
<td>24.44</td>
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<td>Illegal</td>
<td>198</td>
<td>63.16</td>
<td>23.83</td>
<td>17.01</td>
<td>49.48</td>
<td>13.61</td>
<td>80.77</td>
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<td>Medical use</td>
<td>123</td>
<td>71.90</td>
<td>33.61</td>
<td>20.17</td>
<td>61.67</td>
<td>24.39</td>
<td>86.67</td>
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<tr>
<td>Recreational use</td>
<td>31</td>
<td>45.16</td>
<td>25.81</td>
<td>10.00</td>
<td>38.71</td>
<td>22.58</td>
<td>81.48</td>
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<tr>
<td>Physician</td>
<td>214</td>
<td>64.29</td>
<td>29.38</td>
<td>18.66</td>
<td>51.66</td>
<td>18.10</td>
<td>83.50</td>
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<td>Surgeon</td>
<td>52</td>
<td>60.78</td>
<td>31.37</td>
<td>23.53</td>
<td>43.14</td>
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<td>74.00</td>
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<tr>
<td>Nurse, Coordinator,</td>
<td>85</td>
<td>65.85</td>
<td>21.18</td>
<td>10.71</td>
<td>59.76</td>
<td>15.29</td>
<td>86.08</td>
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<td>or Other</td>
<td></td>
<td></td>
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<td>Region/Country</td>
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<td>275</td>
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<td>27.27</td>
<td>15.63</td>
<td>33.33</td>
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<td>48.00</td>
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<tr>
<td>Other</td>
<td>23</td>
<td>56.52</td>
<td>26.09</td>
<td>8.70</td>
<td>47.83</td>
<td>9.09</td>
<td>65.00</td>
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<td>Response to question assessing whether marijuana is physically harmful</td>
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<tr>
<td>Harmful</td>
<td>228</td>
<td>52.04</td>
<td>16.00</td>
<td>8.52</td>
<td>40.72</td>
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<tr>
<td>Not harmful</td>
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<td>88.14</td>
<td>50.42</td>
<td>34.75</td>
<td>75.63</td>
<td>40.34</td>
<td>92.11</td>
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<tr>
<td>Current Practice</td>
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<tr>
<td>Abstinence</td>
<td>241</td>
<td>61.37</td>
<td>21.79</td>
<td>13.36</td>
<td>48.93</td>
<td>14.04</td>
<td>80.18</td>
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<tr>
<td>Case-by-case basis</td>
<td>42</td>
<td>92.68</td>
<td>61.90</td>
<td>39.02</td>
<td>85.00</td>
<td>50.00</td>
<td>97.50</td>
</tr>
<tr>
<td>Denied</td>
<td>70</td>
<td>55.38</td>
<td>22.39</td>
<td>16.42</td>
<td>44.78</td>
<td>12.31</td>
<td>80.95</td>
</tr>
</tbody>
</table>

*Should patients who use legal medical marijuana be listed for heart transplant? †Should patients who use legal recreational marijuana be listed for heart transplant? ‡Should patients who use marijuana in a state where it is not legal be listed for heart transplant? §Should patients who use legal medical marijuana daily be listed for heart transplant? ¶Should patients who use Marinol for cardiac cachexia be listed for heart transplant? #Should patients who use daily opiates for chronic pain be listed for transplant? **Do you think marijuana use is physically harmful?

**Discussion**

Heart transplantation improves mortality in appropriately selected patients with advanced heart failure. Unfortunately, the number of patients who could be helped with transplantation far exceeds the number of available donors and transplant listing committees are forced to select patients based on criteria derived from past data, society guidelines, and community consensus. Substance abuse has long been considered a contraindication to heart transplant because marijuana use violates current federal laws, some illicit drugs have well-documented ill effects on the heart, and because of a belief that patients who abuse substances will have poor compliance after transplantation. Now that marijuana has been legalized in some states for purported medicinal uses, societal norms have changed, states are legislating this issue. Therefore, an assessment of the transplant community’s attitudes about marijuana use by patients was needed to help establish and understand current practice patterns.

This is the most comprehensive survey of attitudes toward patients’ marijuana use in the solid organ transplant community. The data add to smaller surveys that have
assessed practice patterns on the subject. We assessed a large, diverse pool of respondents, including surgeons, physicians, and nurses/transplant coordinators from several different states/countries with varied marijuana laws, suggesting our findings represent the varied opinions within the greater heart transplant community. And, although earlier surveys have asked about general policies toward substance abuse, we focused specifically on marijuana use in a variety of contexts. Although this was a global survey, the responses mostly reflect attitudes toward marijuana use in the United States because the majority of respondents were from the United States (78.6%). Interestingly, there were similar findings between United States and non–United States providers. Responses from individual countries (non–United States) were too small to make meaningful inferences.

A majority of respondents feel that marijuana is physically harmful. Although randomized and high-quality epidemiological data detailing the harms of marijuana use are lacking, several well-done case–control, registry, and cohort studies support this view. Marijuana is a use is a rare trigger for myocardial infarction and has been associated with stroke and thromboangiitis obliterans-type peripheral vascular disease. Marijuana is also associated with cognitive deficits, motor vehicle accidents, and the development of psychosis. There are also concerns specifically related to the immune suppression needed in the post-transplant patient population. Case reports have implicated marijuana use with ventricular tachycardia, exogenous lipid pneumonia, and invasive aspergillosis in immune suppressed patients, although the incidence of these cases is likely rare. These potential risks contradict the public’s perception that marijuana is benign and in certain circumstances a healthful alternative medicine.

Perhaps because of marijuana’s paradoxical position as both an illicit substance with potential harms and a medical treatment, the transplant providers in our survey felt different about transplant listing for patients who use marijuana as a medicine and those who use it as a recreational drug. A clear majority supported listing for medical marijuana patients, whereas a clear majority opposed listing for patients who use the drug for recreation. This observation aligns with an earlier assessment of practices in the heart transplant community on the subject, but differs slightly from the liver transplant community, which is generally more accepting of patients with a history of substance abuse. There are several potential explanations for the disparity in support for medical and recreational marijuana patients. First, after several years of legal medical marijuana in some areas, there may be fewer stigmas associated with medical marijuana use, whereas the negative stigma associated with recreational marijuana persists. Another explanation could be the apparent contradiction associated with one medical provider offering marijuana as a treatment and another denying a therapy (ie, transplant) because a patient took the first physician’s recommendation. Finally, providers may have made their decisions based on what illegal, medical, or recreational marijuana use implied about a patient’s potential compliance with therapy after transplant. The extremely low support for listing patients using marijuana where it is illegal (compared with legal medical marijuana, Marinol, or opiates) may suggest the respondents’ decision was driven by the notion that law-breaking patients would be less compliant with the medication regimens needed to prevent rejection after surgery.

Still, although the perception of medical and recreational marijuana differs in our data set, there is often no clear difference between patients using marijuana for medical and recreational purposes. Unlike most medical treatments we prescribe, marijuana has not been through the United States Food and Drug Administration approval process; thus, its use in clinical practice is ill defined. The indications for marijuana prescriptions are often vague, and many assert that patients can obtain a medical prescription without a clear medical need. And, advanced heart failure is not generally considered to be an indication for treatment with or a condition commonly thought to benefit from marijuana treatment (Table 3). In fact, many conditions that are used to qualify a patient for medical marijuana are considered contraindications to heart transplantation, although other indications such as cachexia, nausea, migraines, pain, seizures, and muscle cramps would not necessarily preclude a patient from transplant. Still, the line between medical and recreational use can be somewhat unclear, and there is concern that both groups would pose a compliance concern.

Poor medication compliance after transplant is associated with transplant coronary artery disease, rejection, and retransplantation. A large meta-analysis of outcomes in solid organ transplant recipients (predominantly liver transplant) with a history of substance abuse concluded these patients do not have greater risk of medication noncompliance than other patients, although they do have higher rates of substance abuse after transplantation. In that study, patients with shorter periods of abstinence (<6 months) were also more likely to relapse. Unfortunately, there are few data

<table>
<thead>
<tr>
<th>Table 3. Indications for Medical Marijuana in California</th>
</tr>
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<tbody>
<tr>
<td><strong>AIDS</strong></td>
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<tr>
<td><strong>Anorexia</strong></td>
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<tr>
<td><strong>Arthritis</strong></td>
</tr>
<tr>
<td><strong>Cachexia</strong></td>
</tr>
<tr>
<td><strong>Cancer</strong></td>
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<tr>
<td><strong>Chronic pain</strong></td>
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<tr>
<td><strong>Glaucoma</strong></td>
</tr>
<tr>
<td><strong>Migraine</strong></td>
</tr>
<tr>
<td><strong>Persistent muscle spasms, including, but not limited to, spasms associated with multiple sclerosis</strong></td>
</tr>
<tr>
<td><strong>Seizures, including, but not limited to, seizures associated with epilepsy</strong></td>
</tr>
<tr>
<td><strong>Severe nausea</strong></td>
</tr>
<tr>
<td><strong>Any other chronic or persistent medical symptom that either:</strong></td>
</tr>
<tr>
<td>Substantially limits the ability of the person to conduct ≥1 major life activities as defined in the Americans with Disabilities Act of 1990 (Public Law 101–336)</td>
</tr>
<tr>
<td>If not alleviated, may cause serious harm to the patient’s safety or physical or mental health</td>
</tr>
</tbody>
</table>

If not alleviated, may cause serious harm to the patient's safety or physical or mental health.
describing the medication compliance, drug relapse, and outcomes of marijuana users, and no information in the postheart transplant setting. Moreover, it is problematic to apply earlier studies of substance abuse patients to legal marijuana users because the patients in each situation are likely to be different. We will need to retrospectively and prospectively evaluate compliance and outcomes in these patients to better characterize this patient population.

Current practice in most centers requires patients using marijuana to abstain for 3 to 6 months before they can be listed for heart transplantation, with rare exceptions for grave medical emergencies after a thorough psychosocial evaluation detailing a patient’s social support and the chances the patient will comply with the complex testing and medication regimen after transplant. Patients using legal substances of abuse such as cigarettes or alcohol are expected to refrain from using these substances before and after transplant. Recent laws that regulate the distribution of organs and provide protections to medical marijuana patients will change the current standard of care. This survey suggests that the heart transplant community both supports and opposes portions of the recently passed state laws providing protections for patients using medical marijuana. Nearly two thirds of respondents supported transplant listing for patients who use medical marijuana but yet still advocate an abstinence period before transplant. This preference is sufficiently strong that providers continue to mandate abstinence, despite laws that do not afford them this authority. The issue of abstinence needs to be clarified in states with legislation providing protections for marijuana-using patients because our data suggest that physicians are not in compliance with current state law by practicing the current standard of care. The current standard of care treats all marijuana use as a substance with the potential for abuse.

Seventy-nine participants reported their current practice patterns from states with legislation,7-14 prohibiting marijuana-using patients from being denied transplant listing based on their use of the substance (Table 4). Six of those respondents were from a state where physicians can mandate a period of abstinence before transplant listing; 73 were from states that do not allow physicians to mandate abstinence before listing. Fifty-four of these respondents were from a state where the legislation was pending during the survey period; 19 were from states with current laws. In the states with laws providing protections for marijuana-using patients, 84.9% of respondents in these states mandate abstinence (72.6%) or deny all marijuana users (12.3%), demonstrating noncompliance with their current or proposed state statutes.

As mentioned above, there is a strong preference for marijuana abstinence before transplant in our sample, a practice which providers may not mandate under our interpretation of current laws in various US states. Illinois,8 Delaware,9 Arizona,10 Rhode Island,11 New Hampshire,12 and Minnesota13 all mandate that providers treat medical marijuana as equivalent of the authorized use of any other medication when considering a patient’s candidacy for organ transplant. But marijuana is different from other medications because it has its own unique place in society and clinical practice. It has its own dispensary system, novel drug-delivery systems (smoking and edible food products), no Food and Drug Administration approval or oversight, and a large place in popular culture that distinguishes it from any other medication. By contrast, Washington state’s law7 specifically provides that physicians may request a period of abstinence before transplant listing.

In California, the legislation recently passed by the legislature14 states that “a physician…. shall not determine the ultimate recipient of an anatomical gift based solely upon a potential recipient’s status as a qualified [marijuana] patient …except to the extent that the qualified patient’s use of medical marijuana has been found by a physician and surgeon, following a case-by-case evaluation of the potential recipient, to be medically significant to the provision of the anatomical gift.” This pending legislation in California does not explicitly give physicians the autonomy to mandate abstinence—a practice commonly used for alcohol and cigarette users and a practice that has improved recidivism rates after organ transplant.24 The laws, written without broad physician input or support, will influence the organ allocation process and will change the availability of organs for all patients, including those waiting without questions of substance use.

There are several limitations to our study. The survey was subject to question order effects and voluntary response, forced choice and leading question biases common with questionnaires.30 Although this is the largest survey of its kind, the number of respondents from certain

<table>
<thead>
<tr>
<th>Table 4. Current Practice Patterns From States With Legislation Prohibiting Marijuana-Using Patients From Being Denied Transplant Listing</th>
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<tbody>
<tr>
<td>States with marijuana-user transplant legislation</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>States with marijuana-user transplant legislation</td>
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</table>

*Providers who mandate a period of abstinence or deny all marijuana-using patients in California, Illinois, Minnesota, Arizona, Delaware, Rhode Island, and New Hampshire were considered to violate current state laws. In Washington State, only providers that deny all marijuana-using patients were considered to violate current law.

†The California legislation was not passed into law at the time of the survey.

strata was limited. We did not ask about the duration of abstinence needed to establish a patient’s listing status, method of marijuana consumption, attitudes toward patient marijuana use before a medical emergency, or marijuana use after transplant. To maintain anonymity, we obtained only basic, self-reported respondent identifying data. Next, although we stopped respondents from filling out the survey multiple times from the same device, we did not keep respondents from filling out the survey multiple times from different computers or forwarding the survey to colleagues, which could skew results. Despite these limitations, given the paucity of data on the safety of marijuana use after transplant and anecdotal reports showing potential harm in immune suppressed patients,\textsuperscript{16-19} guidelines on the topic will rely on this type of information to establish community consensus.

In summary, most providers responding to the survey supported transplant listing for patients using legal, medical marijuana in numbers comparable to the support for listing patients using opiates for chronic pain. A strong majority of respondents supported listing patients using marijuana immediately or after a period of abstinence, with most preferring an abstinence period before consideration of transplant. The policies in the heart transplant community toward patients using marijuana and the laws governing the subject are currently heterogeneous and often in direct conflict. Communication and collaboration between the medical community and legislative groups about marijuana use in transplant candidates is needed to ensure the best patient outcomes with the use of scarce donor organs.

\textbf{Acknowledgments}  
We thank Christine Sumbi for her assistance with data collection and distribution of the survey.

\textbf{Disclosures}  
None

\textbf{References}  
Marijuana has long been considered a substance of abuse and, thus, a contraindication to heart transplantation. In the United States, marijuana use is illegal under federal law, but several states have passed legislation legalizing consumption for medical or recreational use. Others have passed legislation designed to protect marijuana-using patients from being denied transplant listing based solely on their use of the substance. Given this background, we conducted an independent, voluntary survey of 360 heart and lung transplant providers to assess current practice patterns and attitudes toward the consideration of marijuana-using patients for heart transplant. Nearly two thirds of respondents (n=222, 64.4%) supported listing patients with end-stage heart failure for transplant who use legal medical marijuana. Significantly, fewer respondents (n=96, 27.5%) supported transplant listing for patients who use legal recreational marijuana. The majority of respondents prefer mandating abstinence from marijuana before transplant listing (n=217, 62%), a practice that is potentially in conflict with newly passed legislation in some states. We hope these data will help establish normative practice patterns and standardize the approach to marijuana-using patients with advanced heart disease being considered for transplant.