DSM-5 and Substance Use Disorders: Clinicolegal Implications

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Presumed distinctions between substance dependence and substance abuse have been at the heart of the development and utilization of substance-based diversion from criminal prosecution to treatment for the past several decades, including its use in drug courts. These distinctions have been promulgated by organized psychiatry since the publication of the Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM-III) in 1980. With the release of DSM-5 and the replacement of abuse and dependence categories with a single use disorder construct, the legal grounds for diversion in many states now stand at odds with organized psychiatry and its adoption of recent science. This article reviews the scientific basis for the DSM's new classification scheme, the dilemmas posed for states with statutes that rely on the abuse/dependence distinction, and potential remedies for legislatures wishing to keep pace with evolving research and clinical practice.

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Many states have statutes that provide for the diversion to treatment of criminal defendants with substance abuse disorders. Most make a specific distinction between defendants who abuse substances and those who are physiologically or psychologically dependent on substances. Defendants in the latter group are thought to be less responsible for their behavior and appropriate candidates for treatment in lieu of imprisonment. Those in the former group are considered more responsible (and less deserving of special treatment), their substance abuse being seen as a part of their criminal or antisocial pattern of behavior.

Organized psychiatry's early attempts at diagnostic classification suggested that addiction reflected an antisocial personality. In 1952, the first edition of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM) identified Addiction (with subcategories of Alcoholism and Drug Addiction) as part of the Sociopathic Personality Disturbance.[1] Individuals in this group of personality disorders were described as "ill primarily in terms of society and of conformity with the prevailing cultural milieu" (Ref. 1, p 38). In the second edition (DSM-II), addictions were placed alongside, rather than under, the personality disorders, and some definitions were added.[2] Alcoholism was described in terms of "intake great enough to damage [patients'] physical health, or their personal or social functioning" (Ref. 2, p 45). Persons who became intoxicated 4 to 12 times a year were subclassified with "episodic excessive drinking" and those intoxicated more than 12 times a year with "habitual excessive drinking" (Ref. 2, p 45). Dependence on alcohol was subclassified as alcohol addiction and was presumed in the patient who could not abstain for one day or who experienced withdrawal symptoms.

Iterations of the DSM from the third edition (DSM-III)[3] through the fourth edition, revised (DSM-IV-TR),[4] discriminated between "out-of-control use" (dependence) and "harmful use" (abuse).[5,6] For many years now, the law has relied on these DSM distinctions in determining whether defendants with substance abuse disorders are appropriate for diversion.[5]

The elimination of these distinctions in the fifth edition (DSM-5)[7] in favor of a combined substance use disorder construct may well prompt lawmakers and judges in many states to reconsider their sub-

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stance use diversion standards. As psychiatrists and other mental health professionals offer opinions reflecting the DSM-5 nomenclature, challenges to the existing legal structures can be expected as a result. Defendants with mild substance use disorders (corresponding to the previous abuse categories) will question why they are less deserving of diversion than those who have more serious disorders (moderate to severe disorders, corresponding to the previous dependence categories), given the DSM-5 view (and that of contemporary research) that these disorders represent the same underlying condition. Legislative changes in these states are inevitable.

In this article, we review the literature on substance use disorders and the decision to eliminate the abuse/dependence dichotomy in the DSM, the historical development and ideology behind the substance use diversion statutes, the prevalence of such statutes across the states, and the potential difficulties facing psychiatrists and the courts in states where diversion turns on a finding of dependence or addiction. We explore potential statutory responses to these developments and present the advantages and disadvantages of each.

Substance Use Research and the DSM

In 1980, the DSM-III introduced the categories of "abuse" and "dependence," requiring pathological patterns of use or negative consequences of use for a diagnosis of abuse and tolerance or withdrawal for a diagnosis of dependence (plus one of the abuse criteria in the case of alcohol or cannabis dependence).[3] Dependence was considered a "more severe form of Substance Use Disorder than Substance Abuse" (Ref. 3, p 165). In 1987, revisions to the DSM[8] provided that abuse consisted of hazardous use or continued use despite negative consequences plus never having met criteria for dependence, the latter being a new hierarchical diagnostic rule. The diagnosis of dependence in the third edition, revised (DSM-III-R), required meeting at least three of an expanded list of nine criteria.[8] By 1994, the criteria in the fourth edition (DSM-IV)[9] had expanded to the now familiar one criterion of four for diagnosing abuse and three of seven for diagnosing dependence. These criteria are illustrated in Table 1.

In 2007, the DSM-5 Substance-Related Disorders Work Group (hereafter, Work Group) was established. A central question for the Work Group was whether to keep abuse and dependence as separate disorders.[10] The Work Group examined studies involving more than 200,000 subjects. In multiple studies, the dependence criteria were found to be valid and reliable, but the abuse criteria produced equivocal or weak results.[11,12] Often, abuse was diagnosed by a single criterion, usually hazardous use.[10] One option considered by the Work Group was simply to discard the abuse category.[6]

There were good reasons to retain the abuse criteria, however. Two of the three most clinically severe symptoms among both the DSM-IV abuse and dependence criteria were in the abuse category: neglected major roles to use and social/interpersonal problems related to use (Ref. 10, Online Data Sup-

Table 1 DSM-IV vs. DSM-5 Criteria for Substance Disorder Diagnoses

	DSM-IV Abuse Criteria No.		DSM-IV Dependence Criteria No.		DSM-5 Substance Use Disorder Criteria No.	
Neglected major roles to use	1				5	
Hazardous use	2	1 or more of			8	
Legal problems	3	these 4 criteria				n/a
Social/interpersonal problems related to use	4				6	
Tolerance			1		10	
Withdrawal			2		11	2 or more of
Used larger amounts/longer			3		1	these 11 criteria
Repeated attempts to quit/control use			4	3 or more of	2	
Much time spent using			5	these 7 criteria	3	
Activities given up to use			6		7	
Physical/psychological problems related to use			7		9	
Craving	n/a		n/a		4	

Adapted from Reference 10, Figure 1. n/a, not applicable.

plement, Table 2). These two criteria are also part of one set of research criteria that seem to cohere (Factor 1) and are usually interpreted as signs of dependence rather than abuse. Conversely, Factor 2 (usually related to abuse) contains two items from the DSM-IV dependence criteria: using larger amounts longer and withdrawal.[11,12] The two factors, or axes, were always thought to be related[10] and were not considered orthogonal from the beginning of the distinction; they co-occur in some proportion of cases (Ref. 12, p 155). Thus, these criteria sets (Factors 1 and 2), as derived from research analysis, do not precisely match the DSM-IV diagnostic criteria sets as they were established.

The significant overlap between the two constructs can also be explained by a unidimensional understanding of substance use disorders.[10,12–14] That is, they represent the same underlying condition, which is manifested in different individuals in different ways. Further, the criteria of abuse and dependence are intermixed through the spectrum of symptom severity (Ref. 10, Fig. 2). Based on 39 articles describing this effect, the Work Group chose to eliminate the distinction between abuse and dependence and to combine the various criteria into a single diagnosis with 11 criteria (see Table 1).

The Work Group had to select a threshold for diagnosing a substance use disorder under the revised classification scheme, knowing that the decision had the potential to enlarge the pool of diagnosed individuals.[6] The studies on which the Work Group relied suggested no natural threshold for diagnosis.[10] The Work Group wanted to select a value that would maintain the overall prevalence of abuse and dependence diagnoses at DSM-IV levels but that would identify even mild cases that warrant intervention. At the threshold of 2 criteria (of the total 11), the prevalence remained steady and inter-rater agreement was high, so that threshold was chosen (Ref. 10, Table 3).

Concerns have been raised that a threshold of two identifies a heterogeneous population spanning "from simple abuse to severe addiction [such] that it is no longer helpful in guiding understanding, communication, or treatment decisions" (Ref. 6, p 147). The breadth of this categorization raises concerns for criminal justice policy as well, as will be discussed further below.

Of particular interest to forensic mental health clinicians is that the criterion of legal problems associated with substance use was dropped from the final criteria set for several reasons: low prevalence in adult samples, low discrimination of disordered versus nondisordered populations, poor fit with the other criteria, and little information added by retention of the criterion.[10] Although clinical concerns were raised that some patients with substance-related legal problems would become undiagnosed, empirical data suggested otherwise (i.e., the loss of this single criterion would have minimal effect).[10]

A new criterion of "craving" was added to substance use disorders in DSM-5. This item arguably does not contribute much to the diagnostic exercise and is thus not likely to have clinicolegal significance, but there was clinical support for adding it, perhaps in hopes of future biological treatments targeting craving.[10]

The Work Group was focused on the scientific evidence concerning substance use, for clinical purposes. Legal applications, such as those related to criminal diversion, were not a focus of their deliberations. This is consistent with the Cautionary Statement for Forensic Use in the DSM-5: "[I]t is important to note that the definition of mental disorder included in DSM-5 was developed to meet the needs of clinicians, public health professionals, and research investigators rather than all of the technical needs of the courts and legal professions" (Ref. 7, p 25). This latter point is important when considering the language used in some states' substance diversion statutes. As noted above (and discussed in more detail below), diversion statutes in many states turn on findings of "dependence" or "addiction." The Work Group debated the relative merits of each of these terms[15–17] before deciding in the end to discard both in favor of the "more neutral label of 'substance use disorder'" (Ref. 17, p 867).

Sociolegal History of Substance Diversion

The United States Supreme Court recognized the value of substance treatment for criminal offenders more than a half-century ago, in *Robinson v. California*.[18] The majority in *Robinson* affirmed the disease model of addictions, with Justice Douglas (in a concurring opinion) referencing medical literature proclaiming treatment, not prosecution, as the proper response to the condition. The court ruled the crime of addiction unconstitutional, reasoning that punishing people for being addicted, in light of contemporary knowledge, is akin to punishing people for being mentally ill or having another disease, which

would "doubtless be universally thought to be an infliction of cruel and unusual punishment" (Ref. 18, p 666).

Two justices dissented, however, and their opinions reveal a tension between treatment (for presumptive illness) and punishment (for volitional acts). Justice White contrasted the "helpless addict" who has "lost the power to control his acts" (Ref. 18, p 687) with the "regular, repeated or habitual" user of substances (Ref. 18, p 686). He characterized the former as "having an illness" (Ref. 18, p 686), while the latter, he declared, was an "incipient addict, a redeemable user" (Ref. 18, p 688) who should be punished for narcotics use. Justice Clark similarly described the "incipient, volitional stage" of addiction as deserving criminal sanction, distinct from a later progressed stage of addiction in which the individual had "lost the power of self-control" and required hospitalization (Ref. 18, p 681). Justice White bemoaned the majority's failure to recognize the "degrees of addiction" in its bar to prosecution (Ref. 18, p 688). This notion of degrees of addiction presaged definitions the American Psychiatric Association (APA) would adopt six years later in DSM-II, as described above (Ref. 2, p 45).

This debate about deciding moral culpability on the basis of the severity of one's substance use was continued in the Supreme Court's 1968 opinion in *Powell v. Texas*.[19] In *Powell*, the Court upheld the conviction of an alcoholic for public intoxication, distinguishing the (culpable) act of appearing in public in an intoxicated state from the status of addiction, which may not have involved the commission of any act in the court's jurisdiction, much less one that was culpable. The *Powell* Court questioned the *Robinson* majority's certainty about the disease concept of addiction. Justice Marshall, writing for a five-member majority in *Powell*, remarked that there was very little known about alcoholism as an addiction. He discussed at length the lack of agreement in the medical profession about what it means to say that alcoholism is a disease or what constitutes the manifestations of alcoholism, referring in detail to descriptions from E. M. Jellinek's 1960 book, *The Disease Concept of Alcoholism*.[20] The moral culpability dimension is evident in the contrast between Jellinek's "gamma alcoholism" (consisting of tolerance, adaptive cell metabolism, withdrawal and craving, and loss of control) and his "delta alcoholism," which is nearly the same but without the loss-of-control criterion. Marshall was critical of medical jargon asserting "unintelligible distinctions" which "have little meaning" (Ref. 19, pp 525–6). Justice Marshall attributed the confusion to both the "undeveloped state of the psychiatric art" and the "conceptual difficulties inevitably attendant on the importation of scientific and medical models into a legal system generally predicated upon a different set of assumptions" (Ref. 19, p 526). This latter observation may be prescient of the conceptual difficulties clinicians are likely to face in the early years under the DSM-5.

Regardless of the courts' uncertainty about addiction and its proper place in the law, court orders for addicted persons to enter treatment became relatively common by the early 1970s.[21] Organized psychiatry's adoption in 1980 of "dependence" as a diagnostic category[3] provided significant support for the disease model of addiction in the criminal justice system.[22] What the loss of that diagnosis in DSM-5 will mean for the lingering debate about addiction and its conceptualization as a disease undergirding criminal justice diversion[22] will be discussed further below.

The dependence/addiction construct is important not only to the future of substance use diversion statutes but also to the role and operation of the nation's many drug courts. In 1989, the first drug treatment court was established in Miami.[22] A decade later there were nearly 2500 drug courts in the United States, with a 40 percent increase between 2004 and 2009. Today, such courts are in operation in all 50 states and several territories.[23] In many, determination of an offender's disposition turns at least in part on a finding of addiction.

Substance Diversion Statutes

Our review of the law identified 18 jurisdictions in the United States with substance use diversion statutes (Table 2).[24–47] In 12 of these, "addiction" or "dependence" (or being "addicted" or "dependent") serve as criteria for diversion or as grounds for treatment as part of a sentence (Table 2). Of these 12, three include "alcoholism" (or being "alcoholic") as well (Indiana, Nevada, and Oregon). The term "abuse" is used in six of the states' statutes (Florida, Indiana, Iowa, Maryland, Virginia, and Wisconsin), although not necessarily in the clinical sense contem-

Table 2 Laws Related to Substance Use Diversion/Modification of Punishment

State	Addicted	Dependent	Abuse	Certain Crimes	Statute Specifies Clinical Evaluation	Treatability Determination
California	●				●	
Connecticut		● [1]			●	●
Delaware					●	● [2]
Florida			●		● [3]	● [4]
Illinois	● [5]	●			● [3]	●
Indiana			● [6]			●
Iowa	●	●	●	●	●	●
Louisiana	●			● [7]	●[3]	
Maryland		● [8]	●		●	●
Minnesota	●	●				
New Jersey		●			●	●
Nevada	● [6]				●	●
Ohio				● [7]	● [9]	● [10]
Oregon		● [6]			●	
Virginia			●	● [7]	●	● [11]
Washington	●	●			●	●
Wisconsin	●	●	●			●
United States						● [12]

1, Uses "most recent" DSM definition; 2, medical/psychiatric examination and/or treatment; 3, by "service provider" or "program;" 4, referral to services; 5, reference to DSM and ICD for "alcoholism" description; 6, or "alcoholic;" 7, requires relationship between crime and substance use; 8, "Withdrawal" or "tolerance"; 9, "Provider" or health care professional; 10, implied in statute; 11, in need of treatment; 12, drugs courts used in eight states.

plated by the DSM. In four states, diversion is available for defendants charged with certain crimes (Iowa, Louisiana, Ohio, and Virginia), and regardless of diagnosis in Ohio and Virginia. In three of these, the statute requires a relationship between the crime charged and substance use (Louisiana, Ohio, and Virginia). Federal courts are bound by sentencing guidelines that significantly restrict a judge's discretion to order treatment in lieu of imprisonment. Judges, however, may consider an offender's substance use in deciding sentence duration within a sentencing guideline range in sentencing a defendant after revocation of a supervised release.[48–51]

Seven states offer specific statutory definitions of dependence or addiction. In five of these, the definitions are quasi-clinical in nature (Illinois, Maryland, New Jersey, Ohio, and Oregon). For example, Maryland distinguishes "alcohol abuse" ("a disease that is characterized by a pattern of pathological use of alcohol with repeated attempts to control its use, and with significant negative consequences in at least one of the following areas of life: medical, legal, financial, or psycho-social") from "alcohol dependence" ("[a]lcohol abuse. . .and . . .[p]hysical symptoms of withdrawal or tolerance") and "alcohol misuse" ("unlawful use of alcohol" or abuse or dependence).[34]

In the other two states (Iowa and Nevada), the definitions are legally oriented. For example, Nevada defines a drug addict as "any person who habitually takes or otherwise uses any controlled substance, other than any maintenance dosage of a narcotic or habit-forming drug administered pursuant to chapter 453 of NRS, to the extent that the person endangers the health, safety or welfare of himself or herself or any other person."[36]

The other 11 jurisdictions (California, Connecticut, Delaware, Florida, Indiana, Louisiana, Minnesota, Virginia, Washington, Wisconsin and U.S.) appear to assume that the terms have commonly accepted meanings in ordinary language, though expert opinion is commonplace. Nearly all of the statutes make reference to a clinical evaluation to help the court determine dependence or treatability.

Illinois is one of two states that specifically mention the DSM by name. In its definition of alcoholism, the Illinois statute notes "Alcoholism is described and further categorized in clinical detail in the DSM and the ICD [International Classification of Diseases]".[29]

Although the term "alcoholism," in fact, has not been described in the DSM since 1980 or the ICD since 1977,[52] one could make the inference that alcohol dependence has been described in additional detail in the DSM, at least until the DSM-5. The ICD continues to contain a description of alcohol dependence.

Need for Immediate Statutory Response in Connecticut

The other state that makes specific reference to the DSM is Connecticut. In January 2013, Connecticut's substance diversion statute defined an alcohol-dependent person as "a person who has a psychoactive substance dependence on alcohol as that condition is defined in the most recent edition of the American Psychiatric Association's 'Diagnostic and Statistical Manual of Mental Disorders.'"[25] A drug-dependent person was similarly defined. Thus, not only did Connecticut use a dependence construct (like many of the other states), it defined dependence exclusively by reference to the DSM criteria. The inauguration of the DSM-5 changes presented an acute and specific problem for use of the statute, especially since the courts' determinations of dependence rely heavily on assessments by court-ordered clinical examiners.

With the publication of DSM-5 anticipated in May 2013, officials in Connecticut feared that their statute would be made devoid of meaning. By the time the problem came to light, the state's 2013 legislature was already in session. There was little time before the session's close in June for the kind of extensive analysis needed for a thorough reworking of the statutory scheme. Complicating matters, the precise language of the anticipated DSM-5 changes was not available before publication. However, the first author was able to learn that there would be a separate ICD-9-CM code for the new mild alcohol use disorder (2 to 3 of the 11 new criteria), which would be the same code (305.00) as used for alcohol abuse in DSM-IV-TR. The ICD-9-CM code for moderate to severe use disorder (303.90) would be the same as that for dependence in DSM-IV-TR, and the other use disorders would follow suit (personal communication, Darrel A. Regier, Vice-Chair DSM-5 Task Force, February 18, 2013).

The most expedient and practical solution, given the time constraints and available information, was simply to redefine dependence in the Connecticut statutes as a condition that "meets the criteria for moderate or severe. . .use disorder, as described in the most recent edition of the American Psychiatric Association's 'Diagnostic and Statistical Manual of Mental Disorders.'" Legislation was passed, becoming effective October 1, 2013.[53] The implementation date of DSM-5, however, became something of a moving target. In August 2013, the APA noted, "We expect the transition from DSM-IV to DSM-5 will be complete by January 1st, 2014".[54] More recently, however, the APA noted that the Centers for Disease Control and Prevention's National Center for Health Statistics (CDC-NCHS) and the Centers for Medicare and Medicaid Services (CMS) recommended implementation on October 1, 2014, to coincide with the implementation of the ICD-10-CM for all U.S. health care systems.[55] On April 1, 2014, Congress passed the Protecting Access to Medicare Act of 2014 (Pub. L. No. 113-93) which directs the U.S. Department of Health and Human Services to delay implementation of ICD-10 until October 1, 2015.[56]

Thus, ironically, the effort in Connecticut to avoid the dilemma presented by the statute's use of diagnostic terminology no longer in existence resulted, at least temporarily, in another dilemma: the statute's use of diagnostic terminology not yet in official existence. The necessary short-term response to the situation has been for clinicians to evaluate individuals using both DSM-IV-TR and DSM-5 criteria to be sure that no one is missed who might qualify for diversion and to inform the courts of the evaluation results under both criteria sets so that they may decide how to proceed.

There are other shortcomings to this legislative quick fix. For example, an individual could display the three most severe criteria of alcohol use disorders (activities given up, neglected major roles, and social/interpersonal problems; Ref. 10, Online Data Supplement) and not qualify for diversion by virtue of being one criterion short of a moderate use disorder. From a legal perspective, this threshold can be criticized as an artificial boundary excluding those with mild use disorders. From a clinicolegal/public policy perspective, it make sense to divert anyone who has a diagnosable disorder susceptible to intervention, including those with milder disorders, assuming that diversion to treatment reduces recidivism more effectively than incarceration.[57,58] Yet such a proposal would have the potential to overwhelm available clinical and justice resources and thus might represent more of a sociolegal experiment, albeit one worth considering. The plan in Connecticut is to conduct these diversion evaluations noting specifically the presence or absence of all 11 criteria so that there might be empiric data about the potential effects of various thresholds to help guide the next

phase of legislative response. In preliminary results, of the 108 individuals evaluated from January 1, 2014 to September 30, 2014, 101 met criteria by either diagnostic scheme; the average number of DSM-5 criteria identified in this group was seven. Four individuals did not meet criteria by either diagnostic scheme. Three individuals would meet DSM-IV criteria, but not DSM-5 criteria; each of those had three criteria present.

Despite the many challenges, Connecticut's rapid legislative action, in concert with the mobilization of its professional community, has allowed the state's substance diversion system to continue functioning. A long-term solution to the challenges presented by DSM-5's new diagnostic structure and clinical research conceptualization of the disorder will necessitate further development.

Potential Legislative Approaches to the Current Science

With concepts of addiction and dependence falling out of use in the DSM (and out of favor in the research community), there may be a variety of measures that states can take to reform their substance use diversion statutes. One would be to rely on legal definitions of dependence and addiction that are untethered from the DSM or other clinical nomenclature, as some states' statutes already seem to do. This, of course, has the disadvantage of putting forensic assessments at odds with the evolving science and future clinical practice.

Another approach would be to require individual clinical assessments of substance use disorders, using some significant threshold identified in law. This is the approach taken thus far by Connecticut, as described above. The critical element in this method is determining what factors should define the threshold, one that meets the needs of public policy, satisfies legal imperatives, and comports with clinical forensic practice.

A third approach would be to require individual clinical assessments to determine the presence of any substance use disorder (i.e., any rating of severity) and allow courts to divert defendants so diagnosed at the courts' discretion. This approach harmonizes with the DSM-5 objective to identify patients who might benefit from interventions at milder severity levels, but it may leave courts with insufficient guidance for the exercise of discretion.

The choice of available strategies will be informed by data, ideological perspectives, and pragmatic considerations. Using socioeconomic analysis, for example, researchers might generate data on the cost effectiveness of treatment versus incarceration at various thresholds of Substance Use Disorder (SUD) severity. Ideological perspectives will vary but will reflect considerations of retribution (punishment of the offender, commensurate with his culpability and the extent of the harm caused) as well as treatment/rehabilitation and restorative justice. Pragmatic considerations will include the availability of resources (treatment, correctional, and judicial) and the desired sociolegal outcomes.

There are some empiric data that compare diagnoses in DSM-IV and DSM-5. An analysis of data from 23,000 U.S. adult subjects found optimal concordance between DSM-IV alcohol dependence and DSM-5 SUD when four or more criteria were endorsed.[59] The researchers concluded that treatment approaches validated for DSM-IV dependence diagnoses will be applicable to moderate to severe DSM-5 SUD. These data also support the decision made in Connecticut to equate DSM-IV dependence with moderate-severe DSM-5 SUD for diversion to treatment, an approach that could be replicated in other jurisdictions.

In a slightly different analysis of the same data set of 23,000 subjects, other researchers have reported that four or five criteria in DSM-5 alcohol use disorder were the optimal thresholds for matching DSM-IV dependence.[60] As might be expected, four criteria produced higher sensitivity, whereas five criteria produced greater specificity.

Legal applications using these thresholds, however, do not represent a perfect correspondence to the former dependence criteria. In an analysis of a U.S. population, nearly 20 percent of individuals meeting DSM-IV alcohol dependence criteria would not meet DSM-5 Alcohol Use Disorder (AUD) criteria at the moderate or higher severity. Almost all of those individuals lost under DSM-5 criteria had three positive dependence criteria and no abuse criteria under DSM-IV. If mild AUDs were included, none of these cases would be lost. By contrast, eight percent of people who would meet the DSM-5 moderate AUD criteria would not have met the DSM-IV dependence criteria.[61] Other studies have noted the same 20 percent loss of diagnosis in the U.S. population database in the switch from dependence to moderate

AUD,[62] and a 31 percent loss of diagnosis in an Australian sample.[14]

At the same time, studies have revealed an increase in overall prevalence of any use disorder in the transition from DSM-IV to DSM-5: by 62 percent in the Australian sample[14] and by 11 percent in a U.S. sample.[62] In the U.S. sample, six percent of DSM-IV abuse would be upgraded to moderate AUD in DSM-5,[62] compared with eight percent in the Australian sample.[14]

The loss of diagnosis in this transition has implications for jurisdictions that might consider substituting moderate AUD for alcohol dependence. Is a defendant with three serious dependence criteria less deserving of treatment and diversion (on either ideological or cost-benefit grounds) than a defendant who exhibits just one more criterion? Extending diversion and treatment to individuals with milder SUD diagnoses, of course, could have significant resource implications.

There is also an unanswered research question. Would treatment for individuals with mild SUD be as effective as it is for those with dependence or moderate-severe SUD?[59,61] There is some potential that the higher rates of anxiety disorder, physiological dependence, and craving among those in the mild AUD category would make these patients particularly good candidates for pharmacological interventions, including medications that target craving and withdrawal symptoms.[61] Some clinicians argue that evidence-based pharmacotherapy should be offered to all patients with AUD.[63]

Although the general cost-effectiveness of the drug court approach has been demonstrated,[64] the cost-effectiveness of diverting individuals with diagnosable SUDs under DSM-5 has not been studied. There are methodologies for conducting these analyses, however, such as those used in the Return on Investment project in Washington State[65] and the Pew-MacArthur Results First Initiative.[66] As we learn the clinical and legal outcomes of diverting individuals with mild SUD, a cost–benefit analysis will follow, enriching the public policy debate.

Finally, note that a higher proportion of low income individuals, women, and racial/ethnic minorities are seen in the mild AUD category than in the DSM-IV alcohol abuse category.[61] Thus, lowering the threshold for diversion to include mild AUD is likely to increase the diversity of individuals so referred.

Conclusions

At least since the time of *Robinson v. California*,[8] states have recognized that some subset of criminal defendants with substance use disorders are appropriate for diversion to treatment in lieu of traditional sanction. In many states, diversion turns on a finding of substance dependence or addiction. Yet the dependence/addiction construct has fallen from favor recently, rejected by the research community and abandoned by the DSM-5. Among the states whose laws use the dependence/addiction construct, Connecticut has been the most problematic, as its law relied explicitly on DSM definitions that no longer exist. Like Connecticut's, however, many of these laws will face challenges. Once DSM-5 is in official and more widespread use (perhaps following implementation of ICD-10), clinicians and forensic mental health professionals asked to evaluate candidates for diversion will find themselves torn between the demands of the courts and current clinical knowledge and practice. Despite the DSM-5 observation that "when used appropriately, diagnoses and diagnostic information can assist legal decision makers in their determinations" (Ref. 7, p 25), in this realm the bench will face the prospect of confusion. Legal criteria and DSM-5 criteria are likely to diverge in many jurisdictions, and forensic mental health professionals will have to distinguish the two if their assistance is to be welcome. Inevitably, legal reform will be necessary in many states.

Connecticut has made preliminary reforms, supported by data about optimal concordance between DSM-IV dependence and moderate-severe SUD under the DSM-5, but on the basis of U.S. studies, it appears that as many as one-fifth of individuals previously eligible for diversion (under the dependence/addiction approach) may not be eligible with the use of this new approach; this, despite the fact that early empirical data demonstrate only a three percent loss, as noted above. A smaller number of individuals who do not meet previous criteria may become eligible under the new criteria. These empiric considerations have important resource implications that will require monitoring.

The DSM-5 changes have implications as well for the constancy of law and public policy, certainly in jurisdictions with diversion statutes in place but likely in all jurisdictions, given the ubiquity of drug courts. Any new criteria raise the potential for exclusion of some individuals from diversion or the expan-

sion of diversion to a broader range of defendants; these are important considerations in the legislative process. As the boundary separating those who merit diversion from those who do not changes in response to evolving research and professional opinion, the nexus between legal theory and science will be illuminated for further societal inspection. Whatever criteria are established inevitably will be challenged by both defendants and prosecutors. Developments in case law can be expected, in tandem with clinical experience and further research. The unidimensional construct of substance use disorders in the DSM-5 seems to support an ideologically defensible expansion of diversion for all offenders with use disorders.

In his dissent in *Robinson*, Justice White anticipated the possible "consequences" of the Court's decision denying addiction as a crime, perhaps presaging the current challenge:

> If it is "cruel and unusual punishment" to convict appellant for addiction, it is difficult to understand why it would be any less offensive to the Fourteenth Amendment to convict him for use on the same evidence of use which proved he was an addict [Ref. 18, p 688].

In light of contemporary scientific knowledge and clinical practice advancing the unidimensional construct of SUD, states may be hard pressed not to expand diversion eligibility to broader categories of persons with use disorders. Lawmakers, both legislatures and the courts and particularly the drug courts, should proceed cautiously with reform, however, taking close account of the evolving research on diagnosis, amenability to treatment, and risk of recidivism, balancing the goals of justice, public safety, and cost-effectiveness.

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