

# Reference Manual on Scientific Evidence

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Reference Manual on Scientific Evidence

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# Reference Guide on Mental Health Evidence

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# I. Overview of Mental Health Evidence

## A. Range of Legal Cases in Which Mental Health Issues Arise

Evidence presented by mental health experts is common to a broad array of legal cases—criminal and civil. In the criminal realm, these include assessments of defendants’ mental states at the time of their alleged offenses (e.g., criminal responsibility and diminished capacity<sup>1</sup>) and subsequent to the offenses, but prior to the initiation of the adjudicatory process (e.g., competence to consent to a search or waive *Miranda* rights<sup>2</sup>). As cases move toward adjudication, evaluation may be required of defendants’ competence to stand trial or to represent themselves at trial.<sup>3</sup> Postconviction, mental health evidence may be introduced with regard to sentencing, including suitability for probation and conditions of probation.<sup>4</sup> Capital cases uniquely may raise questions regarding a condemned prisoner’s competence to waive appeals or to be executed.<sup>5</sup> Postconfinement, mental health considerations may enter into parole determinations. Indeed, the development of

1. 18 U.S.C. § 17 (defining standard and burden of proof for insanity defense); *Clark v. Arizona*, 548 U.S. 735 (2006) (on the use of testimony for diminished capacity).

2. See Thomas Grisso, *Evaluating Competencies: Forensic Assessments and Instruments* (2002); *Miranda v. Arizona*, 384 U.S. 436 (1966) (holding confessions inadmissible unless suspect made aware of rights and waives them); *Colorado v. Connelly*, 479 U.S. 157 (1986) (holding that mental condition alone will not make a confession involuntary under the Fourth Amendment but may be used as a factor in assessing a defendant’s voluntariness); *United States v. Elrod*, 441 F.2d 353 (5th Cir. 1971) (holding that a person of subnormal intelligence may be deemed incapable of giving consent). See Wayne R. LaFave, *Search and Seizure* 92–93 (2004); Wayne R. LaFave, *Criminal Procedure* 363–65 (2004); Brian S. Love, Comment: *Beyond Police Conduct: Analyzing Voluntary Consent to Warrantless Searches by the Mentally Ill and Disabled*, 48 St. Louis U. L.J. 1469 (2004).

3. *Dusky v. United States*, 362 U.S. 402 (1960) (establishing standard for competence to stand trial); *Pate v. Robinson*, 383 U.S. 375 (1966) (holding that the Due Process Clause of the Fourteenth Amendment does not allow a mentally incompetent criminal defendant to stand trial); *Farretta v. California*, 422 U.S. 806 (1975) (upholding defendant’s right to refuse counsel and represent himself); *Indiana v. Edwards*, 554 U.S. 164 (2008) (finding that the standards for competency to stand trial and to represent oneself need not be the same).

4. Roger W. Haines, Jr., et al., *Federal Sentencing Guidelines Handbook* §§ 5B1.3(d)(5), 5D1.3(d)(5), 5H1.3 (2007–2008).

5. See *Ford v. Wainwright*, 477 U.S. 399 (1986) (upholding the common law bar against executing the insane and holding that a prisoner is entitled to a judicial hearing before he may be executed); *Stewart v. Martinez-Villareal*, 523 U.S. 637 (1998) (holding that death row prisoners are not barred from filing incompetence to be executed claims by dismissal of previous federal habeas petitions); *Panetti v. Quarterman*, 551 U.S. 930 (2007) (ruling that defendants sentenced to death must be competent at the time of their execution); *Atkins v. Virginia*, 536 U.S. 304 (2002) (finding that executing the mentally retarded constitutes cruel and unusual punishment under the Eighth Amendment); *Rees v. Peyton*, 384 U.S. 312 (1966) (formulating the test for competency to waive further proceedings as requiring that the petitioner “appreciate his position and make a rational choice with respect to continuing or abandoning further litigation or on the other hand whether he is suffering from a mental disease, disorder, or defect which may substantially affect his capacity in the premises.”).

specialty services for probationers and parolees with mental disorders suggests that mental health professionals' input at this stage is likely to increase in the future.<sup>6</sup>

Mental health evidence in civil litigation is frequently introduced in personal injury cases, where emotional harms may be alleged with or without concomitant physical injury.<sup>7</sup> Issues of contract may turn on the competence of a party at the time that the contract was concluded or whether that person was subject to undue influence,<sup>8</sup> and similar questions may be at the heart of litigation over wills and gifts.<sup>9</sup> Broader questions of competence to conduct one's affairs are considered in guardianship cases,<sup>10</sup> and more esoteric ones may arise in litigation challenging a person's competence to enter into a marriage or to vote.<sup>11</sup> Suits alleging infringement of the statutory and constitutional rights of persons with mental disorders (e.g., under the Americans with Disabilities Act or the Civil Rights of Institutionalized Persons Act) often involve detailed consideration of psychiatric diagnosis and treatment and of institutional conditions.<sup>12</sup> Allegations of professional

6. Jennifer Skeem & Jennifer Eno Loudon, *Toward Evidence-Based Practice for Probationers and Parolees Mandated to Mental Health Treatment*, 57 *Psychiatric Servs.* 333 (2006).

7. *Dillon v. Legg*, 441 P.2d 912 (Cal. 1968) (allowing recovery based on emotional distress not accompanied by physical injury); *Molien v. Kaiser Foundation Hospitals*, 616 P.2d 813 (Cal. 1980) (holding that plaintiff who is direct victim of negligent act need not be present when act occurs to recover for subsequent emotional distress); *Rodriguez v. State*, 472 P.2d 509 (Haw. 1970) (permitting recovery where a reasonable person would suffer serious mental distress as a result of defendant's behavior); *Roes v. FHP, Inc.*, 985 P.2d 661 (Haw. 1999) (allowing assessment of damages for negligent infliction of emotional distress when plaintiff was in actual physical peril, even if no injury was suffered); *Albright v. United States*, 732 F.2d 181 (C.A.D.C. 1984) (holding that alleging mental distress is sufficient to confer standing); *Cooper v. FAA*, No. 07-1383 (N.D. Cal. Aug. 2008), *rev'd and remanded*, 596 F.3d 538 (9th Cir. 2010) (discussing mental distress as a result of disclosure of personal information); *Sheely v. MRI Radiology Network, P.A.*, 505 F.3d 1173 (11th Cir. 2007) (holding damages available under § 504 of the Rehabilitation Act when emotional distress was foreseeable).

8. See generally E. Allan Farnsworth, *Contracts* 228-33 (2004); John Parry & Eric Y. Drogin, *Mental Disability Law, Evidence, and Testimony* 151-52, 185-86 (2007).

9. See generally William M. McGovern, Jr. & Sheldon F. Kurtz, *Wills, Trusts and Estates Including Taxation and Future Interests* 292-99 (2004); Parry & Drogin, *supra* note 8, at 149-51, 182-85.

10. Parry & Drogin, *supra* note 8, at 138-47, 177-81.

11. *Id.* at 54. *Doe v. Rowe*, 156 F. Supp. 2d 35 (D. Me. 2001) (finding a state law denying the vote to anyone under guardianship by reason of mental disability in violation of the Equal Protection Clause of the U.S. Constitution and Title II of the Americans with Disabilities Act (ADA)); *Missouri Protection & Advocacy Servs. v. Carnahan*, 499 F.3d 803 (8th Cir. 2007) (upholding a state law allowing disenfranchisement of persons under guardianship because it permits individualized determinations of capacity to vote).

12. *Pennsylvania Dep't of Corrections v. Yeskey*, 524 U.S. 206 (1998) (holding that ADA coverage extended to prisoners); *Clark v. State of California*, 123 F.3d 1267 (9th Cir. 1997) (finding state not immune on Eleventh Amendment grounds to suit alleging discrimination under ADA by developmentally disabled inmates); *Gates v. Cook*, 376 F.3d 323 (5th Cir. 2004) (upholding District Court's finding that prison conditions, including inadequate mental health provisions, violated the Eighth Amendment of the U.S. Constitution); *Gaul v. AT&T, Inc.*, 955 F. Supp. 346 (D.N.J. 1997) (finding that depression and anxiety disorders may constitute a mental disability under the ADA); *Anderson v. North Dakota State Hospital*, 232 F.3d 634 (8th Cir. 2000) (finding that a plaintiff's fear

malpractice by mental health professionals, including failure to protect foreseeable victims of a patient's violence,<sup>13</sup> invariably call for mental health expert testimony, as do commitment proceedings for the hospitalization of persons with mental disorders<sup>14</sup> or who are alleged to be dangerous sexual offenders.<sup>15</sup>

### 1. Retrospective, contemporaneous, and prospective assessments

Depending on the questions at issue in a given proceeding, evaluators may be asked to assess the state of mind—including diagnosis and functional capacities—of a person at some point in the past, at present, or in the future.

Retrospective assessments are called for when criminal defendants assert insanity or diminished responsibility defenses, claiming that their state of mind at the time of the crime should excuse or mitigate the consequences of their behaviors, or when questions are raised about competence at some point in the past to waive legal rights (e.g., waiver of *Miranda* rights).<sup>16</sup> In civil contexts, challenges to the capacity of a now-deceased testator to write a will or of a party to enter into a contract, among other issues, will call for a similar look back at a person's functioning at some point in the past.<sup>17</sup> A variety of sources of information are available for such assessments. In some cases (e.g., in criminal proceedings), the defendant is likely to be available for clinical examination, whereas in other cases he or she will not be able to be assessed directly (e.g., challenges to a will). Although the person being evaluated will usually have an interest in portraying him- or herself in a particular light, a direct assessment can nonetheless be valuable in assessing the consistency of the reported symptoms with other aspects of the history and current status of the person. Whether or not the person can be assessed directly, information from persons who were in contact with the person before and during the time in question, including direct reports and contemporaneous

of snakes did not limit ability to work); *Sinkler v. Midwest Prop. Mgmt.*, 209 F.3d 678 (7th Cir. 2000) (holding driving phobia did not substantially limit major life activity of working and hence was not an impairment under the ADA); *McAlinden v. County of San Diego*, 192 F.3d 1226 (9th Cir. 1999), *cert. denied*, 120 S. Ct. 2689 (2000) (reversing summary judgment against plaintiff who alleged that anxiety and somatoform disorders impaired major life activities of sexual relations and sleep); *Steele v. Thiokol Corp.*, 241 F.3d 1248 (10th Cir. 2001) (finding major life activity under the ADA of interacting with others not substantially impaired by obsessive-compulsive disorder).

13. *Tarasoff v. Regents of the Univ. of California*, 551 P.2d 334 (Cal. 1976).

14. *Addington v. Texas*, 441 U.S. 418 (1979) (holding that standard of proof for involuntary commitment is clear and convincing evidence); *O'Connor v. Donaldson*, 422 U.S. 563 (1975) (holding unconstitutional the confinement of a nondangerous mentally ill person capable of surviving safely in freedom alone or with assistance).

15. *Kansas v. Hendricks*, 521 U.S. 346 (1997); *Kansas v. Crane*, 534 U.S. 407 (2002).

16. *Predicting the Past: Retrospective Assessment of Mental States in Litigation* (Robert I. Simon & Daniel W. Shuman eds., 2002); Bruce Frumkin & Alfredo Garcia, *Psychological Evaluations and Competency to Waive Miranda Rights*, 9 *The Champion* 12 (2003).

17. See Thomas G. Gutheil, *Common Pitfalls in the Evaluation of Testamentary Capacity*, 35 *J. Am. Acad. Psychiatry & L.* 514 (2007); Farnsworth, *supra* note 8, at 228–33.

records, is usually an essential part of the evaluation. Sometimes the available data from all of these sources are so limited or contradictory that they will not allow a judgment to be made of a person's state of mind at a point in the past. However, most experienced forensic evaluators appear to believe that conclusions regarding past mental state can often be reached with a reasonable degree of certainty if sufficient information is available.<sup>18</sup>

The most straightforward task for a mental health professional is to evaluate a person's current mental state. In criminal justice settings, concerns about a person's current competence to exercise or waive rights will call for such evaluations (e.g., competence to stand trial or to represent oneself at trial).<sup>19</sup> Civil issues calling for contemporaneous assessments include workers' compensation and other disability claims and litigation alleging emotional harms due to negligent or intentional torts, workplace discrimination, and other harm-inducing situations.<sup>20</sup> At the core of an assessment of current mental state is the diagnostic evaluation described below. As in all evaluations in legal contexts, careful consideration needs to be given to the possibility of secondary gain from manipulation of their presentation for persons being assessed.<sup>21</sup>

In contrast to contemporaneous assessments, the evaluation of a person's future mental state and consequent behaviors is fraught with particular difficulty, especially when the outcome being predicted occurs at a relatively low frequency.<sup>22</sup> Such predictive assessments may come into play in the criminal process when bail is set,<sup>23</sup> at sentencing,<sup>24</sup> and as part of probation and parole decisions.<sup>25</sup> They often involve

18. Robert I. Simon, *Retrospective Assessment of Mental States in Criminal and Civil Litigation: A Clinical Review* in Simon and Shuman, *supra* note 16 at 1, 8; *McGregor v. Gibson*, 248 F.3d 946, 962 (10th Cir. 2001) (stating that although disfavored, retrospective determinations of competence may be allowed in cases when a meaningful hearing can be conducted).

19. See *Dusky v. United States*, 362 U.S. 402 (1960) (holding that a criminal defendant must understand the charges and be able to participate in his defense); *Godinez v. Moran*, 509 U.S. 389 (1993) (holding that a defendant competent to stand trial is also sufficiently competent to plead guilty or waive the right to legal counsel).

20. See, e.g., *Kent v. Apfel*, 75 F. Supp. 2d 1170 (D. Kan. 1999); *Quigley v. Barnhart*, 224 F. Supp. 2d 357 (D. Mass. 2002); *Rivera v. City of New York*, 392 F. Supp. 2d 644 (S.D.N.Y. 2005); *Lahr v. Fulbright & Jaworski, L.L.P.*, 164 F.R.D. 204 (N.D. Tex. 1996).

21. See *United States v. Binion*, 132 F. App'x 89 (8th Cir. 2005) (upholding an obstruction of justice conviction and sentencing determination based on a finding that defendant had feigned mental illness). See discussion, *infra*, Section I.C.2.

22. Joseph M. Livermore et al., *On the Justifications for Civil Commitment*, 117 U. Pa. L. Rev. 75-96 (1968).

23. *United States v. Salerno*, 481 U.S. 739 (1987); *United States v. Farris*, 2008 WL 1944131 (W.D. Pa. May 1, 2008).

24. Tex. Code Crim. Proc. Ann. art. 37.071 (Vernon 1981); *Barefoot v. Estelle*, 463 U.S. 880 (1983).

25. See 28 C.F.R. § 2.19 (2008) for parole determination factors. For probation determination factors, see 18 U.S.C.A. § 356 (2008). See generally Neil Cohen, *The Law of Probation and Parole* §§ 2, 3 (2008).

estimates of the probable effectiveness of treatment, especially in the juvenile justice system, where the lack of amenability of juveniles to mental health treatment is frequently a key consideration in decisions regarding transfer to adult courts.<sup>26</sup> Predictions regarding behavior related to mental disorders are also seen in civil cases, for example, in the civil commitments of persons with mental disorders and in the newer statutes authorizing the commitment of dangerous sex offenders.<sup>27</sup> Damage assessments in civil cases alleging emotional harms will usually call for some estimate regarding the duration of symptoms and response to treatment.<sup>28</sup> The inescapable uncertainties of the course of mental disorders and their responsiveness to interventions create part of the difficulty in such assessments, but an equally important contribution is made by the unknowable contingencies of life. Will a person's spouse leave or will the person lose his job or his home? As a consequence, will the person return to drinking, stop taking medication, or reconnect with friends who have continued to engage in criminal behaviors? At best, predictive assessments can lead to general statements of probability of particular outcomes, with an acknowledgment of the uncertainties involved.<sup>29</sup>

## 2. *Diagnosis versus functional impairment*

A diagnosis of mental disorder per se will almost never settle the legal question in a case in which mental health evidence is presented. However, a diagnosis may play a role in determining whether a claim or proceeding can go forward. The clearest example in criminal law is embodied in the insanity defense, where the impairments of understanding, appreciation, and behavioral control that comprise the various standards must be based, in one popular formulation, on a "mental disease or defect."<sup>30</sup> In the absence of a diagnosis of mental disorder (including mental retardation and the consequences of injury to the brain), an affirmative

26. Michael G. Kalogerakis, *Handbook of Psychiatric Practice in Juvenile Court* 79–85 (1992).

27. See *O'Connor v. Donaldson*, 422 U.S. 563 (1975) (finding that a state may not confine a citizen who is nondangerous and capable of living by herself or with aid); for an example of a sex offender civil commitment statute, see Minn. Stat. § 253B.185 (2008). The constitutionality of civil commitment for dangerous sex offenders was upheld in *Kansas v. Hendricks*, 521 U.S. 346 (1997) (setting forth the procedures for the commitment of convicted sex offenders deemed dangerous due to a mental abnormality).

28. Gary B. Melton et al., *Psychological Evaluations for the Courts: A Handbook for Mental Health Professionals and Lawyers* 413–14 (2007).

29. For a more detailed discussion of predictive assessment regarding future dangerousness, see Section I.E.

30. The American Law Institute standard for the insanity defense reads, "a person is not responsible for criminal conduct if at the time of such conduct as a result of mental disease or defect he lacks substantial capacity either to appreciate the criminality of his conduct or to conform his conduct to the requirements of the law." Model Penal Code and Commentaries § 4.01(1) (Official Draft and Revised Comments 1985) (adopted by American Law Institute, May 24, 1962). The federal insanity defense was codified in the Insanity Defense Reform Act of 1984, *codified at* 18 U.S.C. § 17. See also *Durham v. United States*, 214 F.2d 862 (D.C. Cir. 1954) ("[A]n accused is not criminally responsible

defense of insanity will not prevail.<sup>31</sup> Comparable situations exist in civil commitment proceedings and work disability determinations.<sup>32</sup>

Even where the presence of a mental disorder is not an absolute prerequisite to claims involving mental state, it will often play a *de facto* threshold role. Thus, evidence in cases involving claims of incompetence (e.g., to engage in a contractual relationship) or emotional harms will often address the presence of a diagnosis, even though that may not strictly be required.<sup>33</sup> In these cases, failure to establish a diagnosis may be taken by a factfinder as an indicator of the probable lack of validity of the claim. That is, it may be assumed that unless an underlying disorder can be identified, the claimed impairments are bogus. Thus, conflicting testimony over the presence or absence of a diagnosis is common in cases in which mental health evidence is offered, even when not mandated by the operative legal standard.

Notwithstanding the threshold role played by a mental disorder diagnosis in many cases, the ultimate legal issue usually will turn on the impact of the mental disorder on the person's functional abilities.<sup>34</sup> Those abilities may relate to the person's cognitive capacities, including the capacity to make a legally relevant decision (e.g., granting consent for the police to conduct a warrantless search, altering a will) or the capacity to behave in a particular way (e.g., conforming one's conduct to the requirements of the law, cooperating with an attorney in one's own defense, resisting undue influence), or both (e.g., skill as a parent, competence to proceed with criminal adjudication). The former set of capacities can be denoted as *decisional capacities* and the latter set as *performative capacities*. Many of the legal questions to which mental health evidence may be relevant will involve a determination of the influence of a mental state or disorder on one or both of these sets of capacities. The mere presence of a mental disorder will almost always be insufficient for that purpose. Mental disorder in a criminal defendant, for example, if it does not interfere substantially with competence to stand trial, does not present a basis for postponing adjudication of the case.<sup>35</sup> Some degree of mental disorder, including dementia, without affecting relevant abilities, does not provide grounds for voiding a will.<sup>36</sup> The point can be generalized to all criminal and civil competency determinations, most assessments of emotional harms, and

if his unlawful act was the product of mental disease or defect.”); *note* United States v. Brawner, 471 F.2d 969 (1972), which overturned the Durham Rule (or “product test”).

31. *Tennard v. Dretke*, 542 U.S. 274 (2004); *Bigby v. Dretke*, 402 F.3d 551 (5th Cir. 2005).

32. *Addington v. Texas*, 441 U.S. 418 (1979) (setting the burden of proof required for involuntary civil commitment as requiring clear and convincing evidence); and Social Security Administration Listing of Impairments, available at <http://www.ssa.gov/disability/professionals/bluebook/listing-impairments.htm>.

33. Farnsworth, *supra* note 8, §§ 4.6–4.8, at 228–34.

34. Grisso, *supra* note 2.

35. *United States v. Passman*, 455 F. Supp. 794 (D.D.C. 1978); *United States v. Valierra*, 467 F.2d 125 (9th Cir. 1972).

36. *Rossi v. Fletcher*, 418 F.2d 1169 (D.C. Cir. 1969); *In re Estate of Buchanan*, 245 A.D.2d 642 (3d Dept. 1997).

probably to the majority of cases in which mental health testimony is offered: Unless a mental disorder can be shown to have affected a person's functional capacity, decisional or performative, a diagnosis of mental disorder per se will not be determinative of the outcome.<sup>37</sup>

Despite its importance to the adjudicative process, mental health evidence is often introduced in the context of a serious stigma that attaches to mental disorders<sup>38</sup> and considerable confusion regarding their nature, consequences, and susceptibility to treatment.<sup>39</sup> Diagnoses of mental disorders often are perceived to be less reliable and more subjective than diagnoses of other medical conditions.<sup>40</sup> Symptoms of mental disorders may be seen as reflections of moral weakness or lack of will, and the impact of disorders on functional abilities may not be recognized, or occasionally may be exaggerated.<sup>41</sup> The potential impact and limits of current treatments are not widely understood. Indeed, even the various types of mental health professionals are frequently confused.<sup>42</sup> The remainder of Section I of this reference guide provides background to clarify these issues; Section II considers questions specifically related to the introduction of evidence by mental health experts.

## B. Mental Health Experts

Evidence related to mental state and mental disorders may be presented by experts from a number of disciplines, but it is most commonly introduced by psychiatrists or psychologists.

### 1. Psychiatrists

Psychiatrists are physicians who specialize in the diagnosis and treatment of mental disorders.<sup>43</sup> After college, they complete 4 years of medical school, during

37. For a brief overview of competency evaluations, see Patricia A. Zapf & Ronald Roesch, *Mental Competency Evaluations: Guidelines for Judges and Attorneys*, 37 Ct. Rev. 28 (2000), available at <http://aja.ncsc.dni.us/courtrv/cr37/cr37-2/CR37-2ZapfRoesch.pdf>. For the underlying standard for competency to stand trial, see *Dusky v. United States*, 362 U.S. 402 (1960).

38. Bruce G. Link et al., *Measuring Mental Illness Stigma*, 30 Schizophrenia Bull. 511 (2004).

39. Bruce G. Link et al., *Stigma and Coercion in the Context of Outpatient Treatment for People with Mental Illnesses*, 67 Soc. Sci. & Med. 409 (2008).

40. Thomas A. Widiger, *Values, Politics, and Science in the Construction of the DSMs*, in *Descriptions and Prescriptions: Values, Mental Disorders, and the DSMs 25* (John Z. Sadler ed., 2002).

41. Michael L. Perlin, "Half-Wracked Prejudice Leaped Forth": *Sanism, Pretextuality, and Why and How Mental Disability Law Developed as It Did*, 10 J. Contemp. Legal Issues 3 (1999); Michael L. Perlin, "You Have Discussed Lepers and Crooks": *Sanism in Clinical Teaching*, 9 Clinical L. Rev. 683 (2003); Michael L. Perlin, *The Hidden Prejudice: Mental Disability on Trial* (2000).

42. The degree of popular confusion is underscored by the results of a Web-based search for "psychiatrist vs. psychologist," which turns up a remarkably large number of Web sites attempting to explain the differences between the two professions.

43. Narriman C. Shahrokh & Robert E. Hales, *American Psychiatric Glossary* 157 (2003).

which they spend approximately 2 years in preclinical studies (e.g., physiology, pharmacology, genetics, pathophysiology), followed by 2 years of clinical rotations in hospital and clinic settings (e.g., medicine, surgery, pediatrics, obstetrics/gynecology, orthopedics, psychiatry).<sup>44</sup> Graduating medical students who elect to specialize in psychiatry enter residency programs of at least 4 years' duration.<sup>45</sup> Accredited residencies must currently offer at least 4 months in a primary care setting in internal medicine, family medicine, or pediatrics, and at least 2 months of training in neurology.<sup>46</sup> The remainder of a resident's time is spent learning psychiatry, including inpatient, outpatient, emergency, community, and consultation settings, and with exposure to the subspecialty areas of child and adolescent, geriatric, addiction, and forensic psychiatry. Residents will be taught how to use treatment techniques, among them medications and various forms of psychotherapy. Elective time is usually available to pursue particular interests in greater depth or to engage in research. Didactic seminars, including sessions on neuroscience, genetics, psychological theory, and treatment, and supervision sessions with experienced psychiatrists (and sometimes mental health professionals from other disciplines) complement the clinical experiences.<sup>47</sup>

After completion of 4 years of residency training, a psychiatrist is designated as "board eligible," that is, able to take the certification examination of the American Board of Psychiatry and Neurology in adult psychiatry.<sup>48</sup> Successful completion of this examination process results in the psychiatrist being designated "board certified." Psychiatrists who desire more intensive training in a subspecialty area of psychiatry—for example, child and adolescent or addiction psychiatry—can take a 1- or 2-year fellowship in that area. The psychiatrist who has completed an accred-

44. Medical schools in the United States are accredited by the Liaison Committee on Medical Education, which establishes general curricular and other standards that all schools must meet. Standards are available at <http://www.lcme.org/standard.htm>. Students can elect to extend their medical school training by taking additional time to conduct research or to obtain complementary training (e.g., in public health).

45. Residents who choose to combine adult and child psychiatry training can do so in a 5-year program, or can follow their 4 years of adult residency with 2 years of child training. Some residents will also extend their residency training by adding a year or more during which they conduct laboratory or clinical research.

46. Psychiatric residencies are accredited by the Accreditation Council on Graduate Medical Education. Program requirements are available at [http://www.acgme.org/acwebsite/rrc\\_400/400\\_prindex.asp](http://www.acgme.org/acwebsite/rrc_400/400_prindex.asp).

47. See descriptions of several leading psychiatry residency training programs on their Web sites: Columbia University (<http://www.cumc.columbia.edu/dept/pi/residency/index.html>); Johns Hopkins University ([http://www.hopkinsmedicine.org/Psychiatry/for\\_med\\_students/residency\\_general/](http://www.hopkinsmedicine.org/Psychiatry/for_med_students/residency_general/)); Harvard/Longwood Psychiatry Residency (<http://harvardlongwoodpsychiatry.org/>).

48. Information regarding qualifications for board certification and the examination process is available from the American Board of Psychiatry and Neurology at [http://www.abpn.com/Initial\\_Psych.htm](http://www.abpn.com/Initial_Psych.htm).

ited fellowship<sup>49</sup> is eligible for additional board certification in that subspecialty.<sup>50</sup> Although fellowship training and board certification indicate expertise in a particular area of psychiatry, some psychiatrists are recognized by the courts as having developed equivalent levels of expertise by virtue of extensive clinical experience and self-designed instruction (e.g., continuing education courses, remaining current with the professional literature).<sup>51</sup>

Forensic psychiatry is the subspecialty that focuses on the interrelationships between psychiatry and the law.<sup>52</sup> Hence, forensic psychiatrists are particularly likely to offer evidence as part of court proceedings. Fellowship training in forensic psychiatry involves a 1-year program in which fellows are taught forensic evaluation for civil and criminal litigation and become involved in the treatment of persons with mental disorders in the correctional system.<sup>53</sup> They also learn about the rules and procedures for providing evidence in legal proceedings and for working with attorneys. However, training and/or board certification in forensic psychiatry are not necessarily the best qualification for expertise in a particular case. Although forensic psychiatrists are likely to have more expertise than general psychiatrists for certain kinds of evaluations that are the focus of forensic training (e.g., competence to stand trial, emotional harms), when issues are raised concerning other substantive areas of psychiatry (e.g., the effects of psychopharmacological agents on a civil defendant's ability to drive at the time of an accident that allegedly resulted in injury to the plaintiff), a psychiatrist who specializes in that area will often have greater expertise than someone with forensic training.

49. Accredited subspecialty training is currently available in addiction, child and adolescent, forensic, and geriatric psychiatry, and in psychosomatic medicine. Psychiatrists are also eligible for training in hospice and palliative medicine, pain medicine, and sleep medicine. See accreditation standards at [http://www.acgme.org/acwebsite/rrc\\_400/400\\_prindex.asp](http://www.acgme.org/acwebsite/rrc_400/400_prindex.asp). Fellowship programs also exist in some subspecialty areas for which accreditation and board certification are not available, e.g., research, psychopharmacology, and public and community psychiatry.

50. Typically, when new subspecialties are recognized and accreditation standards are developed, a certain period of time (e.g., 5 years) is allowed for psychiatrists who have gained expertise in that area by virtue of experience or alternative training to achieve board certification. Thus, many psychiatrists who are today board certified in a subspecialty have not completed a fellowship.

51. For a comparable determination involving a counselor, see *Leblanc v. Coastal Mech. Servs., LLC*, 2005 WL 5955027 (S.D. Fla. Sept. 7, 2005) (quoting *Jenkins v. United States*, 307 F.2d 637 (D.C. Cir. 1962) for the proposition that the determination of a psychologist's competence to render an expert opinion is a case-by-case matter based on knowledge, not claim to a professional title).

52. See the definition of forensic psychiatry offered by the American Academy of Psychiatry and the Law: "Forensic psychiatry is a medical subspecialty that includes research and clinical practice in the many areas in which psychiatry is applied to legal issues," available at <http://www.aapl.org/org.htm>. Psychiatrists who have been certified in adult or child psychiatry by the American Board of Psychiatry and Neurology, and who have completed a forensic psychiatry fellowship, can take the examination for subspecialty certification in forensic psychiatry. A description of the requirements for certification can be found at <http://www.abpn.com/fp.htm>. Board certification must be renewed by taking a recertification examination every 10 years.

53. See the accreditation standards in forensic psychiatry at [http://www.acgme.org/acWebsite/downloads/RRC\\_progReq/406pr703\\_u105.pdf](http://www.acgme.org/acWebsite/downloads/RRC_progReq/406pr703_u105.pdf).

## 2. Psychologists

Psychologists have received graduate training in the study of mental processes and behavior.<sup>54</sup> Only a subset of psychologists evaluate and treat persons with psychological or behavioral problems; they may be termed clinical, counseling, health, neuro-, rehabilitation, or school psychologists. In contrast, many psychologists teach and/or pursue research in one of the academic aspects of the field (e.g., cognitive, developmental, or social psychology), or provide consultation of a nonclinical nature (e.g., organizational or industrial psychology).<sup>55</sup> Independent practice in psychology requires licensure from the appropriate state licensure board and generally requires a doctoral degree and postgraduate clinical experience. Although use of the term *psychologist* is restricted in many jurisdictions to licensed psychologists,<sup>56</sup> the term may be applied in some settings to persons with master's-level training in psychology.<sup>57</sup>

After college, students who enter graduate doctoral programs generally require 4 to 6 years to complete their training. Those who intend to pursue clinical work generally receive training in clinical, counseling, or school psychology.<sup>58</sup> Accredited programs in these areas are required to provide a minimum of three academic years of graduate study, and students are required in addition to take a year of clinical internship.<sup>59</sup> Course work must include study of biological aspects of behavior, cognitive and affective aspects of behavior, social aspects of behavior, history and systems of psychology, psychological measurement, research methodology, and techniques of data analysis. Students also must be taught about

54. The American Psychological Association defines the field of psychology in this way: "Psychology is the study of the mind and behavior. The discipline embraces all aspects of the human experience—from the functions of the brain to the actions of nations, from child development to care for the aged. In every conceivable setting from scientific research centers to mental health care services, 'the understanding of behavior' is the enterprise of psychologists." [http://74.125.45.104/search?q=cache:JKti-\\_3SfkQJ:www.apa.org/about/+psychologist+definition&hl=en&ct=clnk&cd=9&gl=us](http://74.125.45.104/search?q=cache:JKti-_3SfkQJ:www.apa.org/about/+psychologist+definition&hl=en&ct=clnk&cd=9&gl=us).

55. See *id.* for the American Psychological Association's characterization of the subspecialties in psychology.

56. See, e.g., Mass. Gen. Laws ch. 112, § 122; N.Y. Educ. Law § 7601.

57. Note that the American Psychological Association urges that the use of the term be restricted to persons with doctoral degrees in psychology: "Psychologists have a doctoral degree in psychology from an organized, sequential program in a regionally accredited university or professional school . . . it is [the] general pattern to refer to master's-level positions as counselors, specialists, clinicians, and so forth (rather than as 'psychologists')." [http://74.125.45.104/search?q=cache:JKti-\\_3SfkQJ:www.apa.org/about/+psychologist+definition&hl=en&ct=clnk&cd=9&gl=us](http://74.125.45.104/search?q=cache:JKti-_3SfkQJ:www.apa.org/about/+psychologist+definition&hl=en&ct=clnk&cd=9&gl=us).

58. Other psychology programs offer training in experimental, social, and cognitive psychology, for example, with the intent of producing graduates who will pursue research or teaching careers, but will not engage in clinical work. *United States v. Fishman*, 743 F. Supp. 713, 723 (N.D. Cal. 1990) (excluding the expert testimony of a social psychologist holding a Ph.D. in sociology).

59. Accreditation of programs in clinical, counseling, and school psychology is undertaken by the Commission on Accreditation of the American Psychological Association. Accreditation standards are available at <http://www.apa.org/ed/accreditation/>.

individual differences in behavior, human development, dysfunctional behavior or psychopathology, and professional standards and ethics. A practicum experience, which usually involves placement in an agency or clinic that provides psychological services, is part of the training experience. Prior to receiving their degrees, students must also complete a 1-year clinical internship, which is often taken at a clinical facility that is separate from their graduate school.<sup>60</sup>

Psychology graduate programs award either the Ph.D. or Psy.D. (“professional psychology”) degree.<sup>61</sup> Ph.D. programs generally place greater emphasis on research training, with students required to complete a research project and write a dissertation. Psy.D. programs ordinarily stress clinical issues and training and have less rigorous research requirements.<sup>62</sup> Supervised work may involve some combination of psychological treatment (e.g., individual or group psychotherapy) and the use of standardized testing techniques (i.e., “psychological tests”). Once licensed, psychologists can practice independently. At present, two states permit psychologists who complete additional training requirements to prescribe medications, although physicians’ groups remain strongly opposed to the practice.<sup>63</sup>

Fellowships in subspecialty areas of psychology are becoming more common, although they are not always linked to subspecialty certification processes. Among the areas in which fellowships have been developed is forensic psychology, generally a 1-year program, with didactic and clinical training in forensic evaluation.<sup>64</sup> Certification in forensic psychology through an examination process is available for psychologists who have completed a fellowship in the field or who have at least 5 years of experience in forensic psychology.<sup>65</sup> As with psychiatry, whether the expertise of a forensic psychologist is relevant to a particular legal issue will vary and needs to be considered on a case-by-case basis.

60. *Id.*

61. See sample Ph.D. program curricula for programs at University of Illinois at Urbana-Champaign (<http://www.psych.uiuc.edu/divisions/clinicalcommunity.php>); Indiana University (<http://bl-psy-appsrv.ads.iu.edu:8080/graduate/courses/clinical.asp>); and University of California at Los Angeles (<http://www.psych.ucla.edu/Grads/Areas/clinical.php>). See sample Psy.D. curricula for programs at Massachusetts School of Professional Psychology (<http://www.mspp.edu/academics/degree-programs/psyd/default.asp>); and Wisconsin School of Professional Psychology (<http://www.wspp.edu/courseswspp.html>).

62. For a discussion of the so-called “Vail model” on which Psy.D. training is based, see John C. Norcross & Patricia H. Castle, *Appreciating the PsyD: The Facts*, 7 *Eye on Psi Chi* 22 (2002), available at [http://www.psichi.org/pubs/articles/article\\_171.asp](http://www.psichi.org/pubs/articles/article_171.asp).

63. N.M. Stat. Ann. § 61-9 (2002); La. Rev. Stat. § 37:2371-78 (2004). Note that the New Mexico statute is set to expire in 2010 under a sunset provision. N.M. Stat. Ann. 61-9-19 (2002).

64. See, e.g., the description of the program at the University of Massachusetts Medical School at <http://www.umassmed.edu/forensicpsychology/index.aspx>.

65. Certification is provided by the American Board of Forensic Psychology. Requirements for candidates are available at: <http://www.abfp.com/>.

### 3. Other mental health professionals

Persons with a variety of other forms of training provide mental health services, including services that generally are referred to as psychotherapy or counseling, with individuals, couples, or groups. The best established of these professions is social work. Schools of social work offer 2-year programs that lead to a master's degree (MSW), and students can elect a track that is often referred to as psychiatric social work, which involves instruction and experience in psychotherapy.<sup>66</sup> Graduate social workers can obtain state licensure after the completion of a period of supervised practice and an examination, resulting in their designation as a "licensed independent clinical social worker (LICSW)," with variation in nomenclature across the states.<sup>67</sup> Social workers may offer psychotherapeutic or counseling services through social service agencies or in private practice. Recently, a subspecialty of forensic social work has begun to develop, involving social workers with experience in the criminal justice system.<sup>68</sup>

Another group that offers mental health services, which may include psychotherapy or counseling and medications, are master's- or doctoral-level nurses. A growing number of nursing schools are developing programs that are termed "psychiatric nursing."<sup>69</sup> Nursing practice is regulated by state law and hence varies across jurisdictions, but master's-level nurses (sometimes referred to as "nurse practitioners") can achieve a status that allows them to provide psychotherapy and to dispense medications, although they may need to have a supervisory arrangement with a physician for the latter.<sup>70</sup>

Other master's-level mental health professionals include persons who may be called psychologists, counselors, marital and family therapists, group therapists, and a variety of other terms.<sup>71</sup> Because state law generally does not regulate the

66. See, e.g., the curricula for social work training at Columbia ([http://www.columbia.edu/cu/ssw/admissions/pages/programs\\_and\\_curriculum/index.html](http://www.columbia.edu/cu/ssw/admissions/pages/programs_and_curriculum/index.html)) and at Smith ([http://www.smith.edu/ssw/geaa/academics\\_msw.php](http://www.smith.edu/ssw/geaa/academics_msw.php)).

67. The Association of Social Work Boards provides an overview of state licensure requirements at <http://www.datapathdesign.com/ASWB/Laws/prod/cgi-bin/LawWebRpts2DLL.dll/EXEC/0/0j6ws4m1dqx37r1ce43dq091bxya>.

68. See the description of forensic social work offered by the National Association of Forensic Social Work at [http://www.nofsw.org/html/forensic\\_social\\_work.html](http://www.nofsw.org/html/forensic_social_work.html). Postgraduate certification programs for forensic social workers are also beginning to be developed, e.g., at the University of Nevada at Las Vegas ([http://socialwork.unlv.edu/PGC\\_forensic\\_social\\_work.html](http://socialwork.unlv.edu/PGC_forensic_social_work.html)).

69. See the listing of training programs in psychiatric nursing, with links to their curricula, provided by the American Psychiatric Nurses Association at <http://www.apna.org/i4a/pages/index.cfm?pageid=3311>.

70. Sharon Christian et al., Overview of Nurse Practitioner Scopes of Practice in the United States—Discussion, Center for Health Professions, University of California, San Francisco (2007), at [http://www.acnpweb.org/i4a/pages/index.cfm?page\\_id=3465](http://www.acnpweb.org/i4a/pages/index.cfm?page_id=3465).

71. See, e.g., the variety of mental health professionals listed by the National Alliance on Mental Illness at [http://www.nami.org/Content/ContentGroups/Hotline1/Mental\\_Health\\_Professionals\\_Who\\_They\\_Are\\_and\\_How\\_to\\_Find\\_One.htm](http://www.nami.org/Content/ContentGroups/Hotline1/Mental_Health_Professionals_Who_They_Are_and_How_to_Find_One.htm). *United States v. Huber*, 603 F.2d 387, 399 (2d Cir.

practice of psychotherapy—although the use of titles such as “psychologist” or “psychotherapist” may be restricted—there is no barrier to persons with variable levels of training in mental health opening independent practices.<sup>72</sup> This includes persons with degrees in educational psychology (M.Ed. or Ed.D.), clergypersons (who may have had some training in pastoral counseling in seminary), and members of disciplines unrelated to mental health. Because of the unregulated nature of their practices, they are largely beyond the reach of professional oversight and discipline.

Although psychiatrists and doctoral-level psychologists generally provide expert evidence related to mental health issues, courts will sometimes admit testimony from other mental health professionals.<sup>73</sup> Given that training and experience vary considerably, and titles may be used inconsistently, an individualized inquiry into the qualifications of the proposed expert is usually required.

1979) (affirming trial court’s rejection of expert testimony on defendant’s mental state from a professor of economics who was also a certified psychoanalyst).

72. The classic study, albeit now somewhat outdated, is Daniel Hogan, *The Regulation of Psychotherapists* (1979); see also Geoffrey Marczyk & Ellen Wertheimer, *The Bitter Pill of Empiricism: Health Maintenance Organizations, Informed Consent and the Reasonable Psychotherapist Standard of Care*, 46 Vill. L. Rev. 33 (2001).

73. *Leblanc v. Coastal Mech. Servs., LLC*, 2005 WL 5955027 (S.D. Fla. Sept. 7, 2005) (finding a marriage and family counselor holding a Ph.D. in family therapy, bachelor’s and master’s degrees in psychology, and a record of relevant publications may be qualified to offer helpful testimony about a plaintiff’s alleged psychological condition); *Jenkins v. United States*, 307 F.2d 637, 646 (D.C. Cir. 1962) (“The critical factor in respect to admissibility is the actual experience of the witness and the probable probative value of his opinion. . . . The determination of a psychologist’s competence to render an expert opinion based on his findings as to the presence or absence of mental disease or defect must depend upon the nature and extent of his knowledge. It does not depend upon his claim to the title ‘psychologist.’”); *United States v. Azure*, 801 F.2d 336, 342 (8th Cir. 1986) (“The social worker was most likely qualified as an expert under Rule 702”); see also *United States v. Raya*, 45 M.J. 251 (1996) (finding that trial court’s admission of expert testimony from a social worker on whether the victim suffered from PTSD was not an abuse of discretion) and *United States v. Johnson*, 35 M.J. 17 (1992) (holding social worker qualified to render opinion that child suffered trauma). Note, however, not all courts have been receptive to social worker testimony offered as expert opinion on the diagnosis of PTSD, e.g., *Neely v. Miller Brewing Co.*, 246 F. Supp. 2d 866 (S.D. Ohio 2003), *Blackshear v. Werner Enters., Inc.*, 2005 WL 6011291 (E.D. Ky. May 19, 2005). For more restrictive approaches to testimony by non-Ph.D. psychologists, see also *State v. Bricker*, 321 Md. 86 (Md. Ct. App. 1990) (rejecting expert testimony from a nonpracticing psychologist who did not hold a doctorate and did not qualify for a reciprocal license under state law). *People v. McDarrah*, 175 Ill. App. 3d 284, 291 (1988) (affirming the trial court’s rejection as an expert witness of a doctoral candidate who did not have the experience level required for state registration as a psychologist). *Parker v. Barnhart*, 67 F. App’x 495 (9th Cir. 2003) (finding error in an administrative law judge’s failure to call a licensed psychologist, rather than another expert, as an expert witness for appropriate testimony). *Earls v. Sexton*, 2010 U.S. Dist. LEXIS 52980 (M.D. Pa. May 28, 2010) (allowing a nurse practitioner to testify in a negligence action concerning whether a motor vehicle accident caused psychiatric injuries).

## C. Diagnosis of Mental Disorders

### 1. Nomenclature and typology—DSM-IV-TR and DSM-5

The standard nomenclature and diagnostic criteria for mental disorders in use in the United States are embodied in the *Diagnostic and Statistical Manual of Mental Disorders*, published by the American Psychiatric Association, and now in its fourth edition with revised text (DSM-IV-TR).<sup>74</sup> It is anticipated that the next edition of the manual (DSM-5) will appear in 2013.<sup>75</sup> According to the DSM framework, the presence of a mental disorder is typically diagnosed by a combination of the symptoms reported by the patient (e.g., sadness, difficulty falling asleep, anxiety) and signs observed by the clinician (e.g., attentional difficulties, sad affect, crying). To qualify for a DSM diagnosis, persons must meet a set of criteria that are characteristic of the disorder.<sup>76</sup> The presence of certain signs and symptoms may be

74. American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders* (4th ed. text rev. 2000) (hereinafter DSM-IV-TR).

75. An alternative nomenclature and set of criteria used internationally can be found in the *International Classification of Diseases*, now in its 10th edition (ICD-10), published by the World Health Organization. Although the DSM-IV-TR and ICD-10 nomenclature and criteria are generally similar, there are differences that can result in diagnostic variations in particular cases, depending on which criteria are applied.

76. E.g., A diagnosis of obsessive-compulsive disorder requires the following:

A. Either obsessions or compulsions:

*Obsessions as defined by (1), (2), (3), and (4):*

- (1) recurrent and persistent thoughts, impulses, or images that are experienced, at some time during the disturbance, as intrusive and inappropriate and that cause marked anxiety or distress
- (2) the thoughts, impulses, or images are not simply excessive worries about real-life problems
- (3) the person attempts to ignore or suppress such thoughts, impulses, or images, or to neutralize them with some other thought or action
- (4) the person recognizes that the obsessional thoughts, impulses, or images are a product of his or her own mind (not imposed from without as in thought insertion)

*Compulsions as defined by (1) and (2):*

- (1) repetitive behaviors (e.g., hand washing, ordering, checking) or mental acts (e.g., praying, counting, repeating words silently) that the person feels driven to perform in response to an obsession, or according to rules that must be applied rigidly
- (2) the behaviors or mental acts are aimed at preventing or reducing distress or preventing some dreaded event or situation; however, these behaviors or mental acts either are not connected in a realistic way with what they are designed to neutralize or prevent or are clearly excessive

B. At some point during the course of the disorder, the person has recognized that the obsessions or compulsions are excessive or unreasonable.

**NOTE: This does not apply to children.**

C. The obsessions or compulsions cause marked distress, are time consuming (take more than 1 hour a day), or significantly interfere with the person's normal routine, occupational (or academic) functioning, or usual social activities or relationships.

D. If another Axis I disorder is present, the content of the obsessions or compulsions is not restricted to it (e.g., preoccupation with food in the presence of an Eating Disorder; hair pulling in the presence of Trichotillomania; concern with appearance in the presence of Body Dysmorphic Disorder; preoccupation with drugs in the presence of a Substance Use Disorder; preoccupation with having a serious illness in the presence of Hypochondriasis; preoccupation with sexual urges or fantasies in the presence of a Paraphilia; or guilty ruminations in the presence of Major Depressive Disorder).

mandatory for a diagnosis to be made, but in most cases—given the variable presentation of most mental disorders—only some proportion of signs and symptoms must be present (e.g., five out of nine).<sup>77</sup>

Since the influential third edition of *DSM* in 1980,<sup>78</sup> the manual has taken a “multiaxial” approach to diagnosis. That is, it recognizes that multiple aspects of a person’s situation—not just the signs and symptoms of disorder—may be relevant to a full understanding of his or her situation. Currently, there are five *DSM* axes: Axis 1 is for the designation of most mental disorders, including substance abuse; Axis 2 covers disorders of personality and mental retardation, which may be present together with or independent of an Axis 1 disorder; Axis 3 addresses concurrent medical disorders; Axis 4 allows the designation of stressors confronting the person; and Axis 5 is a structured scale that speaks to the person’s overall level of functioning.<sup>79</sup> A complete diagnosis in the *DSM* system requires some notation regarding all five axes, although clinicians commonly focus on Axes 1–3. More than one condition may be indicated on Axes 1–4; for example, major depressive disorder and alcohol abuse may coexist on Axis 1, and more than one personality disorder may be noted on Axis 2.

- E. The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition.

DSM-IV-TR at 462–463.

77. E.g., among the criteria required to be met for a diagnosis of Major Depressive Episode are:

A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.

- (1) depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful).

**NOTE: In children and adolescents, can be irritable mood.**

- (2) markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others)
- (3) significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. Note: In children, consider failure to make expected weight gains.
- (4) insomnia or hypersomnia nearly every day
- (5) psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down)
- (6) fatigue or loss of energy nearly every day
- (7) feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)
- (8) diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others)
- (9) recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

DSM-IV-TR at 356.

78. American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders* (3d ed. 1980).

79. DSM-IV-TR at 27–37.

The *DSM* approach has been criticized on a number of grounds, at least one of which is relevant to the evidence likely to be presented in legal proceedings. By requiring that persons being evaluated meet a certain number of particular criteria (e.g., five out of nine signs and symptoms of major depressive disorder), the *DSM* all but guarantees that there will be people who fall just short of qualifying for a diagnosis but may nonetheless be experiencing significant symptoms and impairment.<sup>80</sup> When a mental disorder diagnosis is required as a threshold determination for legal purposes, this may preclude a claim or defense based on the presence of a disorder. In part, *DSM* compensates for this problem by allowing alternative “not otherwise specified” diagnoses to be assigned to persons who fail to meet the full criteria set (e.g., “depressive disorder, not otherwise specified” for persons who fall short of meeting criteria for major depressive disorder),<sup>81</sup> but the problem remains. Suggestions that a more dimensional approach to diagnosis be adopted, that is, one that recognizes a spectrum of extent and severity of symptoms along a continuum associated with a given disorder,<sup>82</sup> have so far been rejected in favor of continuing with the current categorical system.

The goal of the *DSM* is to provide a typology that is useful to clinicians and researchers and that reflects the latest psychiatric understanding of mental disorders.<sup>83</sup> Periodic revisions, such as the process now under way that will result in *DSM-5*, are accomplished by groups of experts, mostly psychiatrists, but include some experts from other disciplines and are ultimately subject to the review and approval of the Board of Trustees and Assembly of the American Psychiatric Association. Hence, the process is sometimes criticized as reflecting social or political biases, as opposed to science.<sup>84</sup> Although such effects cannot be ruled out, to the extent that they exist, they are likely to be associated with a small number of controversial categories and proposed categories (e.g., premenstrual dysphoric disorder,<sup>85</sup> paraphilic rapism<sup>86</sup>). In addition, the *DSM* itself recognizes—in a cautionary statement in the introduction to the text—that diagnostic criteria that are appropriate for clinical or research purposes may not map directly onto legally relevant categories.<sup>87</sup> Caution is therefore required in moving between clinical diagnoses and legal conclusions.

80. Harold A. Pincus et al., *Subthreshold Mental Disorders: Nosological and Research Recommendations*, in *Advancing DSM: Dilemmas in Psychiatric Diagnosis* 129 (Katharine A. Phillips et al. eds., 2002).

81. *DSM-IV-TR* at 381–82.

82. See the papers on dimensional approaches to psychiatric diagnosis published in the *International Journal of Methods in Psychiatric Research*, vol. 16, supplement.

83. Because of confusion regarding the connotations of the term “mental illness,” the *DSM* eschews its use. All *DSM* conditions are referred to as “mental disorders.” *DSM-IV-TR* at xxx–xxxii.

84. Widiger, *supra* note 40, at 25–41.

85. Anne E. Figert, *Women and the Ownership of PMS: The Structuring of a Psychiatric Disorder* (1996).

86. Herb Kutchins & Stuart A. Kirk, *Making Us Crazy: DSM, the Psychiatric Bible and the Creation of Mental Disorders* (2003).

87. The cautionary statement reads, in part: “The purpose of *DSM-IV* is to provide clear descriptions of diagnostic categories in order to enable clinicians and investigators to diagnose,

Given that the anticipated publication of *DSM-5* is not due until 2013,<sup>88</sup> it is not possible at this writing to specify the changes that will appear in the new edition. However, current indications are that the major categories of diagnoses described in the following section will be retained, although specific changes may be made to individual diagnostic criteria.<sup>89</sup> The task force directing the revision process is considering potential changes to the five-axis structure that has existed since 1980,<sup>90</sup> minor modifications to the core definition of a mental disorder,<sup>91</sup> and the introduction of structured assessments of dimensions that cut across diagnostic categories, such as depressed mood, anxiety, substance use, or sleep problems.<sup>92</sup> Proposed changes prior to publication can be tracked on a Web site established by the American Psychiatric Association, which also offers a time line of the steps in the process.<sup>93</sup>

## 2. Major diagnostic categories

Some hint of the number and diversity of mental disorders embodied in the current diagnostic typology is provided by the fact that *DSM-IV-TR* is approximately 900 pages long. However, the characteristics of the major categories of disorders that are likely to be relevant in legal proceedings can be summarized more concisely.<sup>94</sup>

communicate about, study, and treat people with various mental disorders. It is to be understood that inclusion here, for clinical and research purposes, of a diagnostic category such as Pathological Gambling or Pedophilia does not imply that the condition meets legal or other nonmedical criteria for what constitutes mental disease, mental disorder, or mental disability. The clinical and scientific considerations involved in categorization of these conditions as mental disorders may not be wholly relevant to legal judgments, for example, that take into account such issues as individual responsibility, disability determination, and competency.” *DSM-IV-TR* at xxxvii.

88. American Psychiatric Association, *DSM-5 Development, Timeline*, available at <http://www.dsm5.org/about/Pages/Timeline.aspx>.

89. American Psychiatric Association, *DSM-5 Development, Proposed Draft Revisions to DSM Disorders and Criteria*, available at <http://www.dsm5.org/ProposedRevisions/Pages/Default.aspx>.

90. American Psychiatric Association, *DSM-5 Development, Classification Issues Under Discussion*, available at <http://www.dsm5.org/ProposedRevisions/Pages/ClassificationIssuesUnderDiscussion.aspx>.

91. American Psychiatric Association, *DSM-5 Development, Definition of a Mental Disorder*, available at <http://www.dsm5.org/ProposedRevisions/Pages/proposedrevision.aspx?rid=465>.

92. American Psychiatric Association, *DSM-5 Development, Cross-Cutting Dimensional Assessment in DSM-5*, available at <http://www.dsm5.org/ProposedRevisions/Pages/Cross-CuttingDimensionalAssessmentinDSM-5.aspx>.

93. American Psychiatric Association, *DSM-5 Development, DSM-5: The Future of Psychiatric Diagnosis*, available at <http://www.dsm5.org>.

94. These brief summaries of complex and variable conditions are meant to provide an orientation to the nature and course of major mental disorders. The current edition of the *DSM* itself or standard psychiatric textbooks should be consulted for more complete descriptions. Note that for a diagnosis of any disorder to be made per the *DSM*, the symptoms must be deemed to “cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.” *DSM-IV-TR* at 7.

- *Schizophrenia* is a complex psychotic<sup>95</sup> disorder, involving delusions, hallucinations, disorganization of thought, speech, and behavior, and social withdrawal. Social and occupational functioning are markedly impaired. The course is chronic, marked by periodic exacerbations, and often by slow deterioration over time.<sup>96</sup>
- *Bipolar disorder* (formerly called manic-depressive disorder) is a disturbance of mood marked by episodic occurrence of both mania and depression. During manic periods, persons experience elevated, expansive, or irritable mood, accompanied by such symptoms as grandiosity, racing thoughts and pressured speech, decreased sleep, and hypersexuality. The course is chronic, but intermittent, though some patients experience a downward trajectory.<sup>97</sup>
- *Major depressive disorder* involves one or more episodes of depression, typically involving depressed mood, loss of pleasure, weight loss, insomnia, feelings of worthlessness, diminished ability to think or concentrate, and thoughts of death. Episodes are often, but not always, recurrent.<sup>98</sup>
- *Substance disorders* include both substance abuse and substance dependence, the most common of which are alcohol abuse and dependence. Abuse consists of “a maladaptive pattern of substance use leading to clinically significant impairment or distress.”<sup>99</sup> Dependence involves, in addition, signs of tolerance, withdrawal, and lack of success in restricting substance use. These are chronic, and often relapsing, disorders, though successful recovery, with or without treatment, is possible.<sup>100</sup>
- *Personality disorders* are inflexible, maladaptive, and enduring patterns of perceiving and relating to oneself, other people, and the external world that cause functional impairment and distress.<sup>101</sup>
- *Antisocial personality disorder* is often seen in criminal courts, because it is marked by a pervasive pattern of disregard for and violation of the rights of others. Personality disorders tend to be longstanding and difficult to treat.<sup>102</sup>
- *Dementia* is marked by progressive impairment of cognitive abilities, including memory, language, motor functions, recognition of objects, and executive functioning.<sup>103</sup> The most common form of dementia is Alzheimer’s disease, the incidence of which increases with age and the cause of which remains unclear, although in many cases genetics seem

95. Psychotic conditions involve some degree of detachment from reality, characterized by delusional thinking and hallucinatory perceptions. *Id.* at 770.

96. *Id.* at 297–317.

97. *Id.* at 382–92.

98. *Id.* at 369–76.

99. *Id.* at 199.

100. *Id.* at 192–98.

101. *Id.* at 686.

102. *Id.* at 701–06.

103. *Id.* at 147–71.

to play a role.<sup>104</sup> Other causes of dementia include multiple small strokes (“multi-infarct dementia”), trauma, and infection with certain virus-like agents.

Additional disorders that may have special legal relevance include anxiety disorders (including post-traumatic stress disorder (PTSD)), dissociative disorders (such as dissociative identity disorder, formerly multiple personality disorder), impulse control disorders (such as kleptomania and pyromania), sexual disorders (especially the paraphilias, such as pedophilia), delirium, and mental retardation.<sup>105</sup>

The causes of mental disorders remain to be elucidated. However, as a general proposition, it appears that many mental disorders may derive from a genetic predisposition that is activated by particular environmental circumstances.<sup>106</sup> This hypothesis is supported by extensive studies of the genetics of mental disorders<sup>107</sup> and epidemiological studies showing a relationship between various environmental factors and occurrence of illness.<sup>108</sup> Only rarely at this point, however, have particular genes and given stressors been linked to a particular disorder. For example, a genetic variant in an enzyme that regulates neurotransmitter reuptake has been shown to predispose to depression, but only when the susceptible person has been exposed to stressful life events.<sup>109</sup>

104. Matthew B. McQueen & Deborah Blacker, *Genetics of Alzheimer's Disease*, in *Psychiatric Genetics: Applications in Clinical Practice* (Jordan W. Smoller et al. eds., 2008).

105. *Rebrook v. Astrue*, 2008 WL 822104 (N.D. W. Va. Mar. 26, 2008) (anxiety disorder); *United States v. Holsey*, 995 F.2d 960 (10th Cir. 1993) (dissociative disorder); *Coe v. Bell*, 89 F. Supp. 2d 922 (M.D. Tenn. 2000) (dissociative identity disorder); *United States v. Miller*, 146 F.3d 1281 (11th Cir. 1998) (impulse control disorder); *United States v. McBroom*, 991 F. Supp. 445 (D.N.J. 1998) (person receiving treatment for bipolar disorder and impulse control disorder sentenced for possession of child pornography); *United States v. Silleg*, 311 F.3d 557 (2d Cir. 2002) (pedophilia determination in a child pornography case); *Fields v. Lyng*, 705 F. Supp. 1134 (D. Md. 1988) (kleptomania); *United States v. Warr*, 530 F.3d 1152 (9th Cir. 2008) (sentencing of an arsonist diagnosed with pyromania upheld); *Kansas v. Hendricks*, 531 U.S. 346 (1997) (upholding commitment of man unable to control pedophilic impulses); *United States v. Gigante*, 996 F. Supp. 194 (E.D.N.Y. 1998) (dementia); *Johnson v. City of Cincinnati*, 39 F. Supp. 2d 1013 (S.D. Ohio 1999) (estate of man who died from police restraint during a seizure sued the city under 28 U.S.C. § 1983; *Bertl v. City of Westland*, 2007 WL 3333011 (E.D. Mich. Nov. 9, 2007) (finding that delirium tremens is an objectively serious medical need); *Atkins v. Virginia*, 536 U.S. 304 (2002) (banning the execution of the mentally retarded as a violation of the Eighth Amendment); *In re Hearn*, 418 F.3d 444 (5th Cir. 2005); *Hamilton v. Southwestern Bell Tel. Co.*, 136 F.3d 1047, 1050 (5th Cir. 1998) (recognizing PTSD as a mental impairment for the purposes of the Americans with Disabilities Act).

106. Michael Rutter & Judy Silberg, *Gene-Environment Interplay in Relation to Emotional and Behavioral Disturbance*, 53 *Ann. Rev. Psychol.* 463 (2002).

107. Jordan W. Smoller et al., *Psychiatric Genetics: Applications in Clinical Practice* (2008).

108. Ezra Susser et al., *Psychiatric Epidemiology: Searching for the Causes of Mental Disorders* (2006).

109. Avshalom Caspi et al., *Role of Genotype in the Cycle of Violence in Maltreated Children*, 287 *Science* 851 (2002).

Active efforts are under way to explore this “diathesis/stress hypothesis” in other mental disorders as well.<sup>110</sup>

### 3. Approaches to diagnosis

The solicitation of symptoms and the observation of signs necessary for a mental disorder diagnosis can be accomplished with a variety of techniques.

#### a. Clinical examination

Direct clinical examination of the person whose condition is at issue is still the core of most mental health evaluations.<sup>111</sup> In contrast to general medicine, where examination involves the laying on of hands, evaluation of mental disorders is accomplished by careful elicitation of symptoms and observation of signs. A typical sequence of clinical examination involves exploring with the person being evaluated: the current presenting problem, including the specific symptoms experienced and the duration of such symptoms; past history of similar symptoms or other disorders and of treatment for those disorders; developmental history; social and occupational history; family history; medical history, including a review of current medical symptoms, medications taken, and substances used (e.g., alcohol, street drugs, cigarettes); and mental status examination.<sup>112</sup> The last category involves a structured assessment of the person’s mental state, including motor function, speech, mood and affect, thought process and content, cognitive functioning, judgment, and insight, along with the presence of ideation or history of self-harm or harm toward others. Simultaneously, the clinician is observing the person’s behavior and appearance to glean signs associated with mental disorders.<sup>113</sup> If indicated, a physical examination may be performed, if the evaluator is a psychiatrist who has maintained his or her general clinical skills, or requested.

The duration of a clinical examination sufficient to diagnose the person’s condition will vary depending on the complexity of the case, the cooperativeness of the evaluatee, and the questions being addressed. Examinations may take from one to several hours, sometimes spread over multiple sessions. When previous records of contact with mental health professionals are available, the clinician will ordinarily want to review them prior to the clinical examination, so that questions can be targeted more efficiently, and previous conclusions confirmed or

110. Margit Burmeister et al., *Psychiatric Genetics: Progress Amid Controversy*, 9 Nat. Rev. Genetics 527 (2008).

111. For an overview of the evaluation of mental health problems, see Linda B. Andrews, *The Psychiatric Interview and Mental Status Examination*, in *The American Psychiatric Publishing Textbook of Clinical Psychiatry 3* (Robert E. Hales et al. eds., 2008).

112. American Psychiatric Association Work Group on Psychiatric Evaluation, *Practice Guideline for the Psychiatric Evaluation of Adults* (Supplement), 163 Am. J. Psychiatry 7 (2006) [hereinafter *Psychiatric Evaluation of Adults*].

113. Paula T. Trzepacz & Robert W. Baker, *The Psychiatric Mental Status Examination* (1993).

rejected.<sup>114</sup> Information from collateral sources (e.g., spouses, family members, friends, other health professionals) can be valuable in confirming the account given by an evaluatee or in providing information not communicated by the evaluatee, especially when an incentive may exist for the person being examined to exaggerate or downplay the nature and extent of symptoms.<sup>115</sup> In difficult cases, it may not be possible to distinguish with reasonable clinical certainty among two or more possible diagnoses; in such cases, clinicians may assign “rule out” diagnoses, indicating the range of possibilities and deferring a definitive diagnosis until more information is available.

#### b. Structured diagnostic interviews

When a diagnosis is based solely on a clinical examination, which is still most frequently the case, the clinician is being relied upon to conduct a complete evaluation and to apply the diagnostic criteria accurately. Studies that showed considerable variation in the results of clinical evaluations motivated the development, largely for research purposes, of structured diagnostic interviews.<sup>116</sup> Structured interviews provide a fixed set of questions—ensuring that important issues are not omitted from consideration—and a schema for applying the results to the diagnostic framework. Hence, they tend to show increased reliability over unassisted clinical evaluations. More complete diagnostic interviews may allow consideration of a large number of diagnostic categories;<sup>117</sup> focal interviews clarify whether a single disorder (e.g., obsessive–compulsive disorder<sup>118</sup>) or category of disorders is present (e.g., dissociative disorders<sup>119</sup>).

The disadvantages of structured diagnostic assessments include the time that may be required (i.e., more extensive instruments may take several hours to complete) and the fact that many persons respond negatively to an evaluation with a series of preset questions.<sup>120</sup> Many instruments require that the person conducting the interview be trained in their use; administration by untrained personnel may not achieve the level of reliability or validity demonstrated in research studies.<sup>121</sup>

114. Psychiatric Evaluation of Adults, *supra* note 112, at 16.

115. *Id.*

116. Robert Spitzer & Joseph Fleiss, *A Re-analysis of the Reliability of Psychiatric Diagnosis*, 125 *Brit. J. Psychiatry* 341 (1974).

117. See generally Michael B. First et al., *User's Guide for the Structured Clinical Interview for DSM-IV Axis I Disorders: SCID-1 Clinician Version* (1997).

118. See, e.g., Wayne K. Goodman et al., *The Yale Brown Obsessive Compulsive Scale (YBOCS)*, 1: Development, Use and Reliability, 46 *Arch. Gen. Psychiatry* 1006 (1989).

119. See, e.g., Marlene Steinberg, *Structured Clinical Interview for DSM-IV Dissociative Disorders (SCID-D)* (1995).

120. Deborah Blacker, *Psychiatric Rating Scales*, in *Comprehensive Textbook of Psychiatry* 9th ed., 1032 (Benjamin J. Sadock, Virginia A. Sadock, & Pedro Ruiz, eds., 2009).

121. See, e.g., the recommended training requirements for the SCID, available at <http://www.scid4.org/training/overview.html>.

Although structured diagnostic interviews do not reflect the current standard of care for clinical purposes, there may be some value in their use for purposes of forensic evaluation in cases with particularly difficult diagnostic questions.

Diagnostic interviews should be distinguished from instruments that assess the nature and extent of psychiatric symptomatology.<sup>122</sup> The former yield a conclusion about the presence or absence of a psychiatric diagnosis; the latter allow estimates of the type and magnitude of symptoms experienced, regardless of diagnosis. As with diagnostic interviews, symptom measures may be broad in their scope or assess a single type of symptom.<sup>123</sup> Although they are not likely to be used for the purpose of diagnosis per se, the results of applying such instruments may be introduced in evidence to establish the severity of symptoms associated with a disorder.

c. Psychological and neuropsychological tests

Formal testing of psychological functions may be used to complement the clinical diagnostic process, but often it is not necessary for a diagnosis to be made.<sup>124</sup> Psychological tests such as the Minnesota Multiphasic Personality Inventory (MMPI) assess multiple dimensions of personality and mental state; research over many years of use has established correlations between patterns of performance on the MMPI and particular mental disorders, which may be helpful in establishing or confirming a diagnosis, particularly when the results of a clinical examination are inconclusive.<sup>125</sup> Tests of intelligence, such as the Wechsler Adult Intelligence Scale (WAIS-III), are important in establishing the presence of mental retardation and determining its severity.<sup>126</sup> Projective tests, such as the famed Rorschach ink-blot test or the Thematic Apperception Test, were once used more widely than they are today as a means of probing the nature and content of a person's thought processes; although results were said to be helpful for diagnostic purposes, questions about the reliability and validity of projective measures have limited their use.<sup>127</sup> Other tests target personality traits, such as psychopathy, or behavioral characteristics, such as impulsivity, and may be helpful but not determinative in making a diagnosis of mental disorder.<sup>128</sup>

122. See, e.g., John E. Overall & Donald R. Gorham, *The Brief Psychiatric Rating Scale (BPRS): Recent Developments in Ascertainment and Scaling*, 24 *Psychopharmacology Bull.* 97 (1988).

123. Compare the BPRS, *supra* note 122, with the *Beck Depression Inventory*, in Aaron T. Beck et al., *Manual for the Beck Depression Inventory-II* (1996).

124. See discussion in John F. Clarkin et al., *The Role of Psychiatric Measures in Assessment and Treatment*, in Hales et al., *supra* note 111, at 73.

125. Starke R. Hathaway & John C. McKinley, *Minnesota Multiphasic Personality Inventory-2* (1989).

126. David Wechsler, *Wechsler Adult Intelligence Scale-III Administrative and Scoring Manual* (1997).

127. Scott O. Lilienfeld et al., *The Scientific Status of Projective Techniques*, 1 *Psychol. Sci. Publ. Int.* 27 (2000).

128. See, e.g., Robert Hare, *The Psychopathy Checklist-Revised* (1991); Ernest S. Barratt, *Impulsiveness and Aggression*, in *Violence and Mental Disorder: Developments in Risk Assessment* 61 (John Monahan & Henry J. Steadman eds., 1996).

No bright line distinguishes psychological from neuropsychological tests, but in general the latter are focused on assessing the integrity of the functioning of the brain itself.<sup>129</sup> Hence, they may be helpful—and sometimes even essential—in the diagnosis of states of impaired brain function, such as may occur in the wake of traumatic brain injury, infections such as meningitis, and learning disabilities. Neuropsychological testing usually involves the administration of a battery of measures, each targeting a relatively discrete area of function, such as attention, memory, verbal abilities, visual recognition, spatial perception, and the like. The tests selected by neuropsychologists as part of a battery will often vary on the basis of the person’s history and suspected condition; thus, it is important before accepting a conclusion that “neuropsychological testing showed no signs of abnormality” to ascertain precisely which functions were specifically assessed.

Neuropsychological testing can be particularly helpful in the diagnosis of dementia, a condition that may lead to legal challenges to a person’s decisional or performative capacities. Although the diagnosis may be suggested by elements of the person’s history (e.g., forgetfulness, disorientation), serial testing of cognitive functions can provide strong evidence for a progressive disorder.<sup>130</sup> The most frequently used test is the Mini-Mental Status Examination (MMSE), a 20-question screening tool that can be applied by primary care and other clinicians in ordinary treatment settings. Structural and functional brain imaging can be helpful in ruling out other causes of the person’s cognitive decline.<sup>131</sup>

#### d. Imaging studies

Progress has been made in recent years in the use of radiological techniques to assist in the diagnosis and evaluation of mental disorders. With the development of computer-assisted tomography (CAT or CT), a noninvasive technique became available for clinicians to visualize aspects of the gross structure of the brain.<sup>132</sup> CT scans, which use traditional X rays to provide computer-reconstructed pictures of “slices” through the brain, especially when combined with injection of radio-opaque dye into the bloodstream, permit the detection of intracranial masses (e.g., tumors), stroke, atrophy (e.g., associated with Alzheimer’s disease and other dementias), and other deformations of brain structure. More recently, magnetic resonance imaging (MRI) has replaced CT scans in many of the situations in which they previously would have been used. MRI offers higher resolution of

129. Clarkin et al., *supra* note 124.

130. Diane B. Howieson & Muriel D. Lezak, *The Neuropsychological Examination*, in *The American Psychiatric Publishing Textbook of Neuropsychiatry and Clinical Neurosciences* 215–43 (Stuart C. Yudofsky & Robert E. Hales eds., 5th ed. 2008).

131. Marshall F. Folstein et al., *Mini-Mental State: A Practical Method for Grading the Cognitive State of Patients for the Clinician*, 12 *J. Psychiatric Res.* 189 (1975). See discussion *infra* Section I.C.3.d.

132. Robin A. Hurley et al., *Clinical and Functional Imaging in Neuropsychiatry*, in Yudofsky & Hales, *supra* note 130, 245.

brain structures without exposure to X-rays.<sup>133</sup> Regardless of whether CT or MRI is used, however, it is important to note that, despite evidence for the localization of some brain functions (e.g., speech, vision), the general tendency for the brain to function as an integrated network limits the conclusions that can be drawn about a person's functional abilities on the basis of structural studies alone.<sup>134</sup>

Functional imaging techniques have augmented the ability of clinicians to get inside the "black box" of the brain to more directly assess aspects of brain function. These include functional MRI (fMRI), single-photon emission computerized tomography (SPECT), and proton emission tomography (PET).<sup>135</sup> What they have in common is the capacity to detect changes in such characteristics of the brain as blood flow or oxygen saturation of the blood that presumably correlate with the activity of a given brain area. Thus, functional imaging can identify regions with aberrant patterns of activity that may be associated with impaired function in that area of the brain. Again, however, conclusions relevant to diagnosis or impairment of capacities are limited by the frequent absence of a tight correlation between functional imaging findings and actual functional impairment of a sort likely to have legal relevance.<sup>136</sup>

e. Laboratory tests

Use of standard laboratory tests may be helpful in ruling out general medical causes of abnormal mental states and behavior. For example, low levels of thyroid hormone may be associated with a state that resembles a major depressive episode, vitamin B-12 deficiency can lead to psychosis, and disturbance of the balance of electrolytes in the blood can cause states of delirium.<sup>137</sup> Each of these conditions is responsive to treatment of the underlying disorder, and all can lead to more severe and permanent impairments if untreated. Infectious diseases such as HIV, syphilis, and Lyme disease can present as mental disorders otherwise indistinguishable from depression, mania, and acute psychosis; all can be detected with appropriate blood tests.<sup>138</sup> Behavioral abnormalities that may be mistaken for mental disorders can be caused by several forms of epilepsy, which are usually detectable

133. *Id.*

134. William R. Uttal, *The New Phrenology: The Limits of Localizing Cognitive Processes in the Brain* (2003).

135. Yudofsky & Hales, Hurley et al., *supra* note 132 at 261–2.

136. Stephen J. Morse, *Moral and Legal Responsibility and the New Neuroscience*, in *Neuroethics: Defining the Issues in Theory, Practice and Policy* 33 (Judy Illes ed., 2006).

137. H. Florence Kim et al., *Laboratory Testing and Imaging Studies in Psychiatry*, in Hales et al., *supra* note 111, at 19–49.

138. Glenn J. Treisman et al., *Neuropsychiatric Aspects of HIV Infection and AIDS*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 506–31; Brian A. Fallon, *Neuropsychiatric Aspects of Other Infectious Diseases (non-HIV)*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 532–41.

by electroencephalogram (EEG).<sup>139</sup> When there is any reason to suspect, on the basis of a person's history or the findings of a clinical evaluation, that a general medical disorder may exist, laboratory testing is an essential aspect of a complete evaluation. On the other hand, despite many years of investigation of possible correlates of the major mental disorders in blood, urine, and other bodily fluids, there are no laboratory tests that can identify schizophrenia, bipolar disorder, major depression, or other mental disorders.<sup>140</sup>

f. Previous medical and mental health records

Among the most helpful adjunctive sources of information for a diagnostic assessment are the person's records of previous contact with the medical and mental health systems.<sup>141</sup> Past records can confirm a person's account or point to discrepancies that require further exploration (which is particularly important, as described in Section I.C.4, *infra*, when malingering is suspected). Such factors as age of onset, progression of illness, and variability of symptoms, all of which may affect diagnostic choices, can be determined from records of previous medical and mental health evaluations, as can susceptibility to treatment and need for other supportive interventions.

#### 4. Accuracy of diagnosis of mental disorders

Diagnostic accuracy has two separate aspects: (1) reliability—the extent to which two or more examiners of the same person would derive the same diagnosis, and (2) validity—the extent to which the diagnosis corresponds to the person's actual mental state.<sup>142</sup> It is axiomatic that reliability is a necessary, but not sufficient, condition for validity. Prior to the introduction of *DSM-III* in 1980, several influential studies showed poor reliability of psychiatric diagnosis, even for major disorders such as schizophrenia.<sup>143</sup> Reliability improved with the new, criteria-based categories that were introduced at that point, but remains greater for broader categories of diagnosis, such as psychosis, than for finer distinctions, such as whether a person suffers from schizophrenia or the similar but not identical syndrome of schizoaffective disorder.<sup>144</sup> For most purposes, however, as discussed

139. H. Florence Kim, et al., *Neuropsychiatric Aspects of Seizure Disorders*, in Yudofsky & Hales, *supra* note 132, at 649–76.

140. Barry H. Guze & Martha J. Love, *Medical Assessment and Laboratory Testing in Psychiatry*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 996.

141. *Psychiatric Evaluation of Adults*, *supra* note 112, at 16.

142. See Robert E. Kendell, *Five Criteria for an Improved Taxonomy of Mental Disorders*, in *Defining Psychopathology in the 21st Century 3* (John E. Helzer & James J. Hudziak eds., 2002).

143. Spitzer and Fleiss, *supra* note 116.

144. Robert L. Spitzer et al., *DSM-III Field Trials: I. Initial Interrater Diagnostic Reliability*, 136 *Am. J. Psychiatry* 815 (1979); see also *DSM-III* at 467–72; Joseph D. Matarazzo, *The Reliability of Psychiatric and Psychological Diagnosis*, 3 *Clinical Psychol. Rev.* 103–45 (1983); Peter E. Nathan & James

below (see Section I.D), it is unlikely that differences within broader categories of diagnosis will have significance for the legal issue at stake.

The validity of a diagnosis of mental disorder depends on the underlying validity of the diagnostic criteria, that is, the extent to which they accurately characterize a particular psychiatric disorder; and on the validity of the judgment of the diagnosing clinician in a given case, that is, how well the clinician has applied the criteria. Diagnostic criteria can be judged on how well they identify a syndrome whose symptomatology, heritability, course, and treatment response, among other variables, differentiate it from similar disorders.<sup>145</sup> *DSM-IV-TR* diagnostic criteria vary along these dimensions, and it is impossible to make a general statement about the validity of the diagnostic framework as a whole.<sup>146</sup> Again, however, for most legal determinations it is the presence or absence of any mental disorder and associated levels of functional impairment that will be at issue, rather than distinctions among similar disorders. How well the criteria have been applied in a particular case can be determined more easily, whether by means of cross-examination or by virtue of conflicting expert testimony offered by the adverse party.

### 5. *Detection of malingering*

Because the diagnosis of mental disorders rests heavily on the elicitation of symptoms from the person being evaluated and observations of the person's behavior, the possibility of malingering—the deliberate simulation of symptoms of mental disorder—must always be considered.<sup>147</sup> Most commonly, the likelihood of malingering is assessed as part of a clinical evaluation. The pattern of symptoms reported by the person is compared with known syndromes, and the consistency of his or her behaviors is observed. Contrary to common belief, mental disorders are not easy to fake, especially when the deception must be sustained over a period of time.<sup>148</sup>

When deception is suspected, efforts to confirm it should begin during the clinical examination, as the person is offered the opportunity to endorse symptoms that are unlikely to occur naturally (e.g., “Do you ever feel as though the cars on the street are talking about you?”) or do not fit the condition from which the

W. Langenbucher, *Psychopathology: Description and Classification*, 50 *Ann. Rev. Psychol.* 79 (1999). Reliability in actual clinical practice may well be less than has been demonstrated in research settings, especially when the latter make use of structured assessment instruments. See, e.g., M. Katherine Shear et al., *Diagnosis of Nonpsychotic Patients in Community Clinics*, 157 *Am. J. Psychiatry* 581 (2000).

145. The Validity of Psychiatric Diagnosis (Lee N. Robins & James E. Barrett eds., 1989).

146. Kendell, *supra* note 142.

147. Phillip J. Resnick, *Malingering*, in *Principles and Practice of Forensic Psychiatry* 543 (Richard Rosner ed., 2003).

148. *Id.* at 544.

patient is claiming to suffer.<sup>149</sup> Psychological testing can be helpful in detecting deception; the MMPI-2, for example, has scales that correlate with persons who are both “faking bad” (i.e., fabricating symptoms) and “faking good” (i.e., hiding symptoms that actually exist).<sup>150</sup> Other instruments specifically for the assessment of malingering also have been developed, with varying degrees of validation.<sup>151</sup> Information from records of previous psychiatric or psychological evaluations can be helpful in determining the congruence of the person’s current symptoms with past reports and behaviors. In addition, given the difficulty in maintaining a consistent pattern of deception over a sustained period, data provided by collateral sources (e.g., family members, roommates, prisoners in adjoining cells, correctional officers, nurses and other hospital staff, and others who have been in contact with the person) who have observed the person informally outside of the evaluator’s presence can be crucial in distinguishing real from malingered disorders.<sup>152</sup>

The difficulty of simulating a mental disorder does not imply that it is impossible to do. Indeed, a skilled and determined person can sometimes fool even an experienced evaluator. Thus, the only honest response that a clinician can give in almost every circumstance to a question about the possibility of malingering is that it is always possible, but is more or less likely in this particular case, given the characteristics of the person being evaluated.<sup>153</sup>

## D. Functional Impairment Due to Mental Disorders

### 1. Impact of mental disorders on functional capacities

Mental disorders can affect functional capacities in a variety of ways. Among these, *attention* and *concentration* may be impaired by the preoccupations that appear in anxiety and depressive disorders, or the grosser distractions (e.g., auditory hallucinations) of psychotic disorders.<sup>154</sup> *Perception* is often distorted in psychotic condi-

149. Paul S. Appelbaum & Thomas G. Gutheil, *Clinical Handbook of Psychiatry and the Law* 248–49 (2007).

150. Roger L. Greene, *Malingering and Defensiveness on the MMPI-II*, in *Clinical Assessment of Malingering and Deception* 159 (Richard Rogers ed., 2008). These scales, especially the most prominent of them, the “Fake Bad Scale (FBS),” are not without controversy that has sometimes led courts to rule them inadmissible. David Armstrong, *Malingering Test Roils Personal-Injury Law: “Fake Bad Scale” Bars Real Victims, Its Critics Contend*, *Wall Street J.*, Mar. 5, 2008, at A1. However, the bulk of the psychological literature appears to support the validity of the FBS and many of the other MMPI-based malingering scales. Nathaniel W. Nelson et al., *Meta-Analysis of the MMPI-2 Fake Bad Scale: Utility in Forensic Practice*, 20 *Clinical Neuropsychologist* 39 (2006).

151. Richard Rogers, *Structured Interviews and Dissimulation*, in *Clinical Assessment of Malingering and Deception* 301–22 (Richard Rogers ed., 2008).

152. Appelbaum & Gutheil, *supra* note 149.

153. Resnick, *supra* note 147.

154. Ronald A. Cohen et al., *Neuropsychiatric Aspects of Disorders of Attention*, in Yudofsky and Hales, *supra* note 132, at 405–44.

tions, as manifest by hallucinations of the auditory, visual, tactile, or other sensory systems.<sup>155</sup> *Cognition*, encompassing both the process and content of thought, is also often affected: Thought processes can be impeded by the slowing of thought in depression, its acceleration in mania, or the scrambling of thought experienced by persons with schizophrenia or other psychotic disorders; thought content may be altered by the odd reasoning to which persons with delusions appear to be prone.<sup>156</sup> *Motivation* to act, even in one's self-interest, is often globally reduced in states of intense depression and in schizophrenia.<sup>157</sup> *Judgment and insight* may be altered under the pressure of delusions.<sup>158</sup> *Control of behavior* can be weakened by the impulsivity seen in mania and psychosis, the drives of the impulse disorders, and the use of disinhibiting substances, especially alcohol.<sup>159</sup> Any of these impairments in principle could affect a person's relevant decisional and performative capacities.

This necessarily incomplete list of the ways in which mental disorders can affect functional capacities illustrates the vulnerability of almost every aspect of mental functioning to perturbation. Moreover, although it is common to divide mental functions into categories such as these for heuristic purposes, most neuroscientists recognize that the brain operates as a unified entity.<sup>160</sup> Thus, it is rare that impairments are limited to a single area of functioning. Impaired concentration, for example, inherently affects cognitive abilities, which in turn may alter judgment and therefore the person's choice of behaviors. Although focal deficits may occur, for example, the anxiety associated with exposure to a phobic stimulus such as a spider, more severe disorders will have a broader impact on a person's functional capacities as a whole.<sup>161</sup>

## 2. Assessment of functional impairment

Determining the nature and extent of past, present, or future functional impairment, therefore, is usually the most critical aspect of a mental health evaluation and subsequent presentation of mental health evidence.

155. Andre Aleman & Frank Laroi, *Hallucinations: The Science of Idiosyncratic Perception* (2008).

156. Ann A. Matorin & Pedro Ruiz, *Clinical Manifestations of Psychiatric Disorders*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 1076–81.

157. *Id.* at 1092–93.

158. Phillipa A. Garety, *Insight and Delusions*, in *Insight and Psychosis* 66, 66–77 (Xavier F. Amador & Anthony S. David eds., 1998).

159. Eric Hollander et al., *Neuropsychiatric Aspects of Aggression and Impulse-Control Disorders*, in Yudofsky & Hales, *supra* note 132, at 535–66.

160. William R. Uttal, *supra* note 134.

161. The pervasive impact of schizophrenia on all aspects of personality and functioning is the most extreme example. See Michael J. Minzenberg et al., *Schizophrenia*, in Hales et al., *supra* note 111, at 407–56.

a. Clinical examination

As in establishing a diagnosis, the core of the assessment of functional impairment remains the clinical examination.<sup>162</sup> A diagnostic assessment may be integral to the functional assessment process, suggesting to the examiner areas of possible impairment to be explored in greater depth (e.g., attentional and concentration abilities in an anxiety disorder; impairments in motivation in a depressive disorder). Beginning in the 1970s, however, there was growing recognition among the mental health professions that merely establishing a diagnosis is insufficient to permit a conclusion to be drawn about a legally relevant capacity, because a broad range of functional impairments can be associated with almost any mental disorder.<sup>163</sup>

Thus, in addition to a diagnostic assessment, an adequate examination will explore the person's perspective on the alleged functional impairment and will probe for symptoms associated with such impairment. The process involves more than simply taking the person's word for the issue in question, for example, that she was not able to comprehend the details of the contract to which she is a party, or that he remains incapable of the careful calculations required in his job. Assessors compare the claimed impairments with the person's overall history and other areas of function, looking for congruence or incongruence. For example, the assertion by a plaintiff that because of being harassed on the job he has been unable to concentrate sufficiently to work will be more or less plausible depending on the consistency and extent of his symptoms and the degree to which the impairment may generalize to other areas of his life. Degrees of impairment that are out of scale with the extent of symptoms or the person's functional history are inherently suspect.<sup>164</sup>

In addition to questioning the evaluatee directly, the use of collateral information can be essential to a valid assessment, particularly when the person has an incentive to malingering, which will often be the case in legal proceedings.<sup>165</sup> Family members, coworkers, and others who have had an opportunity to observe the person can provide invaluable information about the nature and extent of impairments, although one must always be alert to the possibility that informants will be motivated to assist the person by distorting or exaggerating their accounts. Records of performance, such as educational test results and work evaluations, especially if generated prior to the filing of the legal claim, may shed somewhat more objective light on the person's capacities.<sup>166</sup> To the extent that impairments

162. See *supra* Section I.C.2.a.

163. Michael Kindred, *Guardianship and Limitations upon Capacity*, in *The Mentally Retarded and the Law* 62 (The President's Committee on Mental Retardation, 1976); Laboratory of Community Psychiatry, Harvard Medical School, *Competency to Stand Trial and Mental Illness* (1973).

164. Richard Rogers, *Detection Strategies for Malingering and Defensiveness*, in *Clinical Assessment of Malingering and Deception* 14 (Richard Rogers ed., 2008).

165. Appelbaum & Gutheil, *supra* note 149.

166. Melton et al., *supra* note 28, at 53–55.

may be rooted in disruptions of brain functions per se, neuropsychological testing can also be helpful in documenting their nature and extent. Increasingly, however, it has been accepted that an unstructured clinical evaluation, even when supplemented by collateral information, is not necessarily the most accurate tool, standing on its own, for determining functional capacity.<sup>167</sup>

b. Structured assessment techniques

As with determination of diagnosis, the evaluation of the limitations of function due to mental disorders increasingly involves the use of structured assessment techniques.<sup>168</sup> Most commonly, these are standardized interviews or data-gathering protocols (e.g., based on a person's psychiatric record) designed to ensure that all relevant information is obtained. In addition, where research has established the validity of the instruments by demonstrating a correlation between the results and actual impairments, these techniques may allow a quantitative estimate to be made of the extent of actual functional deficiencies. A recent compendium of assessment instruments included structured evaluations that address criminal defendants' competence to stand trial, waiver of rights to silence and legal counsel, criminal responsibility and persons' parenting capacity, competence to manage one's affairs (i.e., need for a guardian or conservator), and competence to consent to medical treatment and research.<sup>169</sup> Given that this area is a rapidly developing focus of research, instruments to address other legally relevant functional capacities and states—propensity to commit violent or sexual offenses comes quickly to mind<sup>170</sup>—are continuously being tested and developed.

Although most assessment techniques rely on information gathered from the person being evaluated or from existing records, some approaches involve direct testing of the person's capacity to perform particular tasks. Examples include computerized assessment of driving capacities,<sup>171</sup> observation of tasks involving

167. Grisso, *supra* note 2. Surprisingly few studies exist of the reliability of clinical forensic evaluations. The only U.S. study of actual assessments showed good interrater reliability of evaluations of competence to stand trial, although many of the reports were deficient in other ways. Jennifer L. Skeem et al., *Logic and Reliability of Evaluations of Competence to Stand Trial*, 22 *Law Hum. Behav.* 519 (1998). A more recent Australian study found only fair to moderate reliability across assessments of competence to stand trial, but moderate to good reliability of criminal responsibility evaluations. Matthew Large et al., *Reliability of Psychiatric Evidence in Serious Criminal Matters: Fitness to Stand Trial and the Defence of Mental Illness*, 43 *Austl. N.Z. J. Psychiatry* 446 (2009).

168. *Id.*

169. *Id.*

170. See, e.g., Christopher D. Webster et al., *HCR-20 Assessing Risk for Violence Manual*, Version 2 (1997); Vernon L. Quinsey et al., *Violent Offenders: Appraising and Managing Risk* (1998); John Monahan et al., *COVR—Classification of Violence Risk, Professional Manual* (2005).

171. Maria T. Schultheis et al., *The Neurocognitive Driving Test: Applying Technology to the Assessment of Driving Ability Following Brain Injury*, 48 *Rehabilitation Psychol.* 275 (2003).

the handling and management of money<sup>172</sup> and of parenting skills,<sup>173</sup> and direct measurement of such capacities as understanding and reasoning about medical information when a person's competence to decide about medical treatment is at issue.<sup>174</sup> In general, these approaches reduce the degree of inference required in drawing conclusions about a person's functioning because the person is observed performing something close to the precise tasks in question. Of course, such techniques may not be relevant when the legal issue relates to the impact of mental disorder on functional abilities at some time in the past or in the future, especially if the person's mental state at present may be different from what it was or will be. Nonetheless, these can be useful approaches to evaluation in appropriate legal contexts.

The advantages that attend the use of structured assessment instruments include the thoroughness of the evaluation, because the likelihood is reduced that variables that have been shown to be important to assessment will be omitted, and in many cases, a research base exists from which conclusions can be drawn regarding the degree of functional impairment of the person being assessed.<sup>175</sup> Indeed, in some jurisdictions, the use of structured assessments is required for particular purposes (e.g., evaluation of sexual offenders).<sup>176</sup> However, it remains true that the use of structured assessments performed for the purpose of being introduced in legal proceedings is variable and far from universal.<sup>177</sup> Grisso, the leading scholar in this area, suggests three reasons why this is still true: (1) it is easier and may be more lucrative (i.e., where a fixed rate is being paid per evaluation) for an examiner to avoid the frequently time-consuming use of a structured instrument; (2) many cases involve persons whose functional impairments—or lack of impairment—are obvious, and use of a structured assessment instrument would be “overkill”; and (3) perhaps paradoxically, the use of an assessment tool makes experts more vulnerable to attack on cross-examination.<sup>178</sup> To this list should be added the lack of knowledge of many expert witnesses regarding the existence of these instruments and a sense that their use denigrates the evaluator's expertise.

The vulnerability of testimony based on assessment instruments to cross-examination is worth special emphasis. Opinions offered on the basis of “clinical

172. Dan Marson et al., *Assessing Financial Capacity in Patients with Alzheimer's Disease: A Conceptual Model and Prototype Instrument*, 57 *Archives Neurology* 877 (2000).

173. Marc J. Ackerman & Kathleen Schoendorf, *Ackerman-Schoendorf Scales for Parent Evaluation of Custody Manual* (1992).

174. Thomas Grisso & Paul S. Appelbaum, *MacArthur Competence Assessment Tool for Treatment (MacCAT-T)* (1998).

175. Grisso, *supra* note 2, at 45–47.

176. *See, e.g.*, Va. Code Ann. § 37.2-903-C: “Each month the Director shall review the database and identify all such prisoners who are scheduled for release from prison within 10 months from the date of such review who receive a score of five or more on the Static-99 or a like score on a comparable, scientifically validated instrument designated by the Commissioner. . . .”

177. Grisso, *supra* note 2, at 481.

178. *Id.* at 481–82.

experience,” which appears to be the norm, are difficult to challenge when expert witnesses in fact have appropriate training and a good deal of experience with the condition in question.<sup>179</sup> On the other hand, assessment instruments can be subjected to scrutiny with regard to the empirical database that supports their use, including their reliability and validity, their acceptance by the relevant professional community, and their probative value in a particular case. There may also be questions regarding the examiner’s training and experience with the instrument and whether it was administered in the manner intended by its developers. All of these are legitimate questions, of course, and an argument can be made that the introduction of data from assessment instruments into evidence should be held to a more rigorous standard, because factfinders may give such data greater credence than unassisted clinical judgment.<sup>180</sup> But the undoubted consequence is that the arguably more reliable and perhaps more valid data from empirically derived assessment techniques are less likely to be introduced in evidence than evaluators’ subjective judgments of unknown validity.<sup>181</sup>

## E. Predictive Assessments

As noted above,<sup>182</sup> predictive assessments are the most challenging evaluations performed by mental health professionals.<sup>183</sup> The most common tasks involve the prediction of violence risk and of future functional impairment and responses to treatment.

### 1. Prediction of violence risk

The probability that a person may commit a violent act at some point in the future may come into play in the criminal process regarding determinations of suitability for diversion, bail, sentencing, probation, and parole, and in the civil process in hearings for civil commitment to psychiatric facilities and sexual offender treat-

179. See 4 Jack B. Weinstein, *Weinstein’s Federal Evidence* § 702:02 n.1 (2d ed. 2008) on the liberal admissibility of expert testimony under Federal Rule of Evidence 702; § 702.02[4] nn.25–27 on the trial judge’s broad discretion to admit or exclude expert testimony, to determine its helpfulness and relevancy, and the application of the “abuse of discretion” standard of review to determinations of whether a witness qualifies as an expert; § 702.04[1][c] on the typical “academic credentials plus experience” combination. *Bryan v. City of Chicago*, 200 F.3d 1092 (7th Cir. 2000) (an expert may qualify based on academic expertise and practical experience).

180. Christopher Slobogin, *Experts, Mental States, and Acts*, 38 *Seton Hall L. Rev.* 1009 (2008).

181. Grisso, *supra* note 2, at 482.

182. See *supra* Section I.A.1.

183. Yogi Berra, New York Yankees’ Hall of Fame catcher and philosopher of everyday life, is purported to have said, “It’s tough to make predictions, especially about the future.” See <http://www.famous-quotes-and-quotations.com/yogi-berra-quotes.html>. For a discussion of the origin of this phrase, see Henry T. Greely & Anthony D. Wagner, *Reference Guide on Neuroscience*, Section VII, in this manual.

ment programs and when considering the imposition of liability on clinicians and facilities for failing to protect victims of patients' violence.<sup>184</sup> Although not all persons for whom such assessments must be made will have mental disorders, many will, and, in any event, psychiatrists and psychologists are seen by the courts as having expertise in this area and hence are almost invariably called upon for these evaluations.<sup>185</sup>

Persons with serious mental disorders, such as schizophrenia or bipolar disorder, are often considered by the general public to be at high risk for violence.<sup>186</sup> However, data on the relationship between serious mental disorders (schizophrenia is the disorder most frequently studied) and violence are variable. Although most studies suggest a moderately elevated risk, the proportion of violence accounted for by serious mental disorders is small, probably 3% to 5%, based on the best available U.S. estimates.<sup>187</sup> Data also suggest that the stereotype of violent mental patients who assault strangers in public places is inaccurate: Most violence by persons with serious mental disorders is directed at family members and friends and usually occurs in the living quarters of the perpetrator or the victim.<sup>188</sup> Much higher rates of violence are associated with substance use, especially alcohol use, and with traits such as psychopathy, often found in antisocial personality disorders.<sup>189</sup> Indeed, most of the strongest predictors of violence are common to both persons with serious mental disorders and those without, suggesting that the impact of the disorders per se is slight.<sup>190</sup>

#### a. Approaches to prediction of violence risk

Clinical evaluation of violence risk ordinarily focuses on those variables that have been shown in empirical research to have the strongest relationship to future violence,<sup>191</sup> whether the information is gleaned directly from the person or

184. See, e.g., *Kansas v. Hendricks*, 521 U.S. 346 (1997); *White v. Johnson*, 153 F.3d 197 (5th Cir. 1998). A unanimous U.S. Supreme Court pointed to the importance of considering empirical data in identifying circumstances associated with increased risk of violence in *Chambers v. United States*, 130 S. Ct. 567, 691–93 (2009).

185. See Joanmarie Ilaria Davoli, *Psychiatric Evidence on Trial*, 56 SMU L. Rev. 2191 (2003).

186. Bernice Pescosolido et al., *The Public's View of the Competence, Dangerousness and Need for Legal Coercion Among Persons with Mental Illness*, 89 Am. J. Pub. Health 1339 (1999).

187. Jeffrey W. Swanson, *Mental Disorder, Substance Abuse, and Community Violence: An Epidemiologic Approach*, in *Violence and Mental Disorder: Developments in Risk Assessment* 101, 101–36 (John Monahan & Henry J. Steadman eds., 1994); Paul S. Appelbaum, *Violence and Mental Disorders: Data and Public Policy* (editorial), 163 Am. J. Psychiatry 1319 (2006).

188. Henry J. Steadman et al., *Violence by People Discharged from Acute Psychiatric Inpatient Facilities and by Others in the Same Neighborhoods*, 55 Archives Gen. Psychiatry 393 (1998).

189. John Monahan et al., *Rethinking Risk Assessment: The MacArthur Study of Mental Disorder and Violence* (2001).

190. *Id.* at 37–90; Simon Wessely, *The Epidemiology of Crime, Violence, and Schizophrenia*, 170 Brit. J. Psychiatry 11 (1997).

191. Appelbaum & Gutheil, *supra* note 149, at 56.

derived from collateral informants or from a review of relevant records. These variables include a history of previous violence, age (violence risk peaks in the late teens and early twenties, declines slowly through the twenties and thirties, and drops off precipitously after age 40), male gender, lower socioeconomic status and employment instability, substance abuse, psychopathic personality traits, and childhood victimization.<sup>192</sup> The evaluation process is complicated by the fact that literally scores of variables show some significant correlation with future violence, but usually with little predictive power for each.<sup>193</sup> However, beginning with the variables noted above, the evaluator estimates the baseline risk of violence for the person and then adjusts that value by taking into account foreseeable perturbations to the current equilibrium. When previous violence has occurred, the risk estimate is adjusted to include those specific variables that have been associated with violence by this person in the past (e.g., being left by a girlfriend), including whether they are present at the time of evaluation or likely to recur in the future.<sup>194</sup>

The past two decades have seen the development of a growing number of structured assessment instruments specific to the prediction of future violence risk. Among the best known of these are the HCR-20,<sup>195</sup> the Violence Risk Assessment Guide (VRAG),<sup>196</sup> and the computerized Classification of Violence Risk (COVR).<sup>197</sup> A set of instruments also exists for the prediction of the risk of future sexual offenses.<sup>198</sup> Violence risk-assessment instruments have been developed in one of two ways: either by assembling known predictors from the research literature and combining them with variables drawn from clinical experience (e.g., HCR-20), or on the basis of statistical analysis of research data from large subject populations (e.g., VRAG and COVR). Attempts are then made to validate the instruments on populations similar to the ones with which it is anticipated they will be used. The more sophisticated measures yield estimates of the degree of risk, rather than dichotomous predictions that violence will or will not occur. In general, the most commonly used instruments have shown a correlation between the estimated degree of risk and future violence.<sup>199</sup>

192. *Id.*

193. Monahan et al., *supra* note 189, at 163–68.

194. Appelbaum & Gutheil, *supra* note 149.

195. Webster et al., *supra* note 170.

196. Quinsey et al., *supra* note 170.

197. Monahan et al., *supra* note 170.

198. Calvin M. Langton et al., *Actuarial Assessment of Risk for Reoffense Among Adult Sex Offender: Evaluating the Predictive Accuracy of the Static-2002 and Five Other Instruments*, 34 *Crim. Just. & Behav.* 37–59 (2007).

199. Kevin S. Douglas et al., *Assessing Risk for Violence Among Psychiatric Patients*, 67 *J. Consulting Clinical Psychol.* 917 (1999); Grant T. Harris et al., *Prospective Replication of the Violence Risk Appraisal Guide in Predicting Violent Recidivism Among Forensic Patients*, 26 *Law & Hum. Behav.* 377 (2002); John Monahan et al., *An Actuarial Model of Violence Risk Assessment for Persons with Mental Disorders*, 56 *Psychiatric Servs.* 810 (2005).

The literature on prediction is marked by strong and unresolved differences of opinion over the best basis for the ultimate risk estimate. Partisans of exclusive reliance on the quantitative predictions generated by structured assessment instruments, which is often referred to as “actuarial” prediction, argue that any attempts to modify the resulting risk estimates necessarily reduce accuracy.<sup>200</sup> Proponents of clinical evaluation note that exclusive reliance on instrumentation is unwise because of the inevitable questions about the applicability of the group data on which an instrument is based to the person being evaluated; the failure of a fixed set of questions ever to capture all the variables that may be relevant in a particular situation; and the potential uncooperativeness of evaluatees with a structured process.<sup>201</sup> Compromise approaches include anchoring the estimate in the actuarial prediction, but allowing clinical judgment to modify the results on the basis of additional considerations, or using an instrument to structure the evaluation and ensure its completeness, but allowing the evaluator to reach a judgment on the basis of the totality of the information. This last approach has been termed “structured professional judgment,”<sup>202</sup> and at least one study has suggested that it is capable of yielding predictions with reasonable degrees of accuracy.<sup>203</sup> It is fair to say that the question of which approach is best remains unresolved.

#### b. Limitations of violence risk prediction

A voluminous research literature exists on violence risk prediction. Studies of predictions by psychiatrists and psychologists in the 1960s and 1970s showed poor accuracy in judging whether persons with mental disorders and sex offenders would be likely to be violent at some point after release.<sup>204</sup> Indeed, the most frequently cited conclusion was Monahan’s statement that when mental health professionals predicted that a person would be violent, they were twice as likely to be wrong as right.<sup>205</sup> The cumulative impact of these findings stimulated a great deal of research to identify variables that predict violence and their incorporation into both clinical predictions and the structured assessment instruments described above.<sup>206</sup>

200. N. Zoe Hilton et al., *Sixty-Six Years of Research on the Clinical Versus Actuarial Prediction of Violence*, 34 *Counseling Psychol.* 400 (2006).

201. Thomas R. Litwak, *Actuarial Versus Clinical Assessments of Dangerousness*, 7 *Psychol. Pub. Pol’y & L.* 409 (2001); Andrew Carroll, *Are Violence Risk Assessment Tools Clinically Useful?* 41 *Austral. & N.Z. J. Psychiatry* 301 (2007).

202. Kevin S. Douglas & P. Randall Kropp, *A Prevention-Based Paradigm for Violence Risk Assessment: Clinical and Research Applications*, 29 *Crim. Just. & Behav.* 617 (2002).

203. Kevin S. Douglas et al., *Evaluation of a Model of Violence Risk Assessment Among Forensic Psychiatric Patients*, 54 *Psychiatric Servs.* 1372 (2003).

204. John Monahan, *The Clinical Prediction of Violent Behavior* (1981).

205. *Id.* at 60.

206. John Monahan, *Clinical and Actuarial Predictions of Violence: II. Scientific Status*, in *Modern Scientific Evidence: The Law and Science of Expert Testimony*, vol. 1, at 122, 122–47 (David L. Faigman et al., 2007).

At this point, it is possible to identify several items of consensus from the research literature. Violence is not a unitary phenomenon; that is, it occurs for different reasons, related both to the motivations of the perpetrator and to the environmental context.<sup>207</sup> A bar-room brawl has different roots than a mugging; the precipitants of spouse abuse bear little similarity to the motivations underlying a killing that has been premeditated as an act of revenge. Thus, no single variable or set of variables can be relied upon in all cases to ascertain violence risk. Long-term prediction of violence is inherently inaccurate, due both to the intrinsic limitations in the prediction of low-frequency events<sup>208</sup> and to the difficulty that clinicians have in anticipating changes in the person and the environment over time and their effects on the person's behavior.<sup>209</sup> However, shorter-term prediction (i.e., days to weeks) holds greater potential for accuracy. Indeed, recent studies focused on shorter-term prediction, often from hospital emergency rooms, have found accuracies for predictions of violence in the range of 40% to 60%.<sup>210</sup> It is worth noting that even when the leading actuarial instruments are used to make dichotomous judgments of future violence—that is, a cutoff is set to simulate the clinical prediction process—their rates of accuracy are similar.<sup>211</sup> Mental health professionals, therefore, have been encouraged to move away from attempting to make dichotomous judgments of dangerousness and toward predictions couched in terms of the risk of future violence.<sup>212</sup> Even here, though, precision has not yet been attained—and may be unattainable. The state of the art probably allows well-trained clinicians, especially if they are using structured assessment instruments, to assign persons into high-, medium-, and low-risk groups with reasonable accuracy. At present, the hope of designating risk categories with greater precision than that for most categories of persons with mental disorders is likely illusory.<sup>213</sup> When quantitative data are available, however, precision in communication of risk

207. Paul S. Appelbaum, *Preface*, in *Clinical Assessment of Dangerousness: Empirical Contributions* ix–xiv (Georges-Franck Pinar & Linda Pagani eds., 2001).

208. Paul E. Meehl, *Clinical Versus Statistical Prediction: A Theoretical Analysis and a Review of the Evidence* (1954).

209. Jennifer L. Skeem et al., *Building Mental Health Professionals' Decisional Models into Tests of Predictive Validity: The Accuracy of Contextualized Predictions of Violence*, 24 *Law & Hum. Behav.* 607 (2000).

210. That is, 40% to 60% of those who have been predicted to be violent go on to commit violent acts. Note that because interventions to prevent the predicted violence (e.g., hospitalization) may be taken with many of these subjects, the figures probably underestimate the proportion of true positive predictions. In addition, when clinicians predicted that a person would not be violent, they almost always tended to be correct, with well over 90% of such predictions in most studies being accurate. See, e.g., Charles W. Lidz et al., *The Accuracy of Predictions of Violence to Others*, 269 *JAMA* 1007 (1993); Dale E. McNiel & Renée L. Binder, *Clinical Assessment of the Risk of Violence Among Psychiatric Inpatients*, 148 *Am. J. Psychiatry* 1317 (1991).

211. See studies cited *supra* note 199.

212. Henry J. Steadman et al., *From Dangerousness to Risk Assessment: Implications for Appropriate Research Strategies*, in *Mental Disorder and Crime* (Sheilagh Hodgins ed., 1993).

213. Webster et al., *supra* note 170, at 10.

would undoubtedly be enhanced if they were utilized and if assessors specified their definitions of the categories being employed.<sup>214</sup>

The studies on the accuracy of prediction, whether clinical or actuarial, have typically involved the direct evaluation of the person about whom the prediction was being made. In many cases, considerable additional information about the person was available. Opinions about the risk of future violence by persons whom the evaluator has not examined have never been validated, and there are persuasive reasons to believe that such predictions are not likely to be highly accurate.<sup>215</sup> Such opinions have been introduced, for example, in death penalty cases in which the prosecution sought to prove that further violence was likely, but the defense denied the prosecution expert direct access to the defendant.<sup>216</sup> If such evidence is to be introduced, at a minimum, one would expect that the limitations on the assessor's knowledge of the evaluatee and on the certainty with which conclusions can be reached would be noted.

## 2. Predictions of future functional impairment

Cases involving claims of emotional harms, along with disability and workers' compensation claims, often require that efforts be made to estimate the plaintiff's future functional impairment so that damages can be determined accordingly.<sup>217</sup> Techniques for the assessment of function were described above. See discussion *supra* Section I.D.2. However, these cases call for something more: predictions of the degree of change in functional impairment due to mental disorders that are likely to occur over time. In contrast to the structured assessment tools that assist in the prediction of future violence risk, no instruments have been developed

214. See Kelly M. Babchishin & R. Karl Hanson, *Improving Our Talk: Moving Beyond the "Low," "Moderate," and "High" Typology of Risk Communication*, 16 *Crime Scene* 11 (2009). Suggestions for improving the clarity of risk communications include distinguishing between the likelihood of future violence and the anticipated severity of the offense, specifying the period for which the prediction is being made (e.g., "over the next 6 months"), indicating the comparison population for the estimate (e.g., "risk is high compared with the general population" or "risk is high compared with the population of persons with similar histories of violence"), and providing both absolute and relative risks when quantitative data are available (e.g., "risk of future violence over the next year is between 8 and 12%, which is between 4 and 6 times greater than would be expected for the general population").

215. Brief of Amici Curiae American Psychiatric Association, *Barefoot v. Estelle*, 463 U.S. 880 (1983) (No. 82-6080).

216. See *Barefoot v. Estelle*, 463 U.S. 880 (1983); Ron Rosenbaum, *Travels with Doctor Death*, *Vanity Fair*, May 1990, at 141.

217. 20 C.F.R. § 404.1520a (2008). See generally Thomas P. Harding, *Psychiatric Disability and Clinical Decision Making: The Impact of Judgment Error and Bias*, 24 *Clinical Psychol. Rev.* 707 (2004); Harold A. Pincus et al., *Determining Disability Due to Mental Impairment: APA's Evaluation of Social Security Administration Guidelines*, 148 *Am. J. Psychiatry* 1037 (1991); Cille Kennedy, *SSA's Disability Determination of Mental Impairments: A Review Toward an Agenda for Research*, in *The Dynamics of Disability: Measuring and Monitoring Disability for Social Security Programs* 241 (Gooloo S. Wunderlich et al. eds., 2002); Dan B. Dobbs, *The Law of Torts* 1048-53, 1087-1110 (2000).

and validated to predict future functional status at this writing. Such predictions are complicated by the need for simultaneous estimates of several parameters that affect long-term functional outcome: variables intrinsic to the person (e.g., symptomatic fluctuation, changes in motivation to work), variables that relate to the environment (e.g., divorce, availability of new categories of jobs), and responses to treatment (see discussion *infra* Section I.F.6). Research aimed at identifying variables associated with some types of future functional impairment exists, but is largely focused on progressive disorders (e.g., Alzheimer's disease), and even here the accuracy of the predictions of forensic evaluators has not been determined.<sup>218</sup> Hence, acknowledgment of the uncertainties inherent in these predictions would appear to be unavoidable for experts undertaking this task.

## F. Treatment of Mental Disorders

The nature of available treatments for mental disorders, the probability that they will be effective, the side effects that they may induce, and the existence of alternatives are likely to be material to a variety of legal cases. In criminal proceedings, for example, the continued confinement of a defendant in a psychiatric hospital on the basis of incompetence to stand trial will be based in part on the probability that treatment of the person will restore capacity;<sup>219</sup> involuntary treatment of the defendant will turn on a number of factors, including the likelihood of success and the side effects and their potential for impairing the defendant's defense.<sup>220</sup> Decisions about probation and parole of mentally disordered offenders may also relate to the likelihood that symptoms will remain in check, and courts may order ongoing treatment as a condition of release.<sup>221</sup> Among the civil cases for which treatment-related questions will be at issue are liability claims for malpractice and failure to protect third parties from patient violence, claims involving emotional harms (e.g., in calculating the cost of future care), and issues related to the deprivation of rights of prisoners in correctional facilities to have adequate mental health treatment.<sup>222</sup> Treatment of mental disorders today offers multiple options for most disorders, often with different levels of likely effectiveness and varying side-effect profiles. Planning treatment has become an increasingly complex task.

218. See, e.g., Roy Martin et al., *Declining Financial Capacity in Patients with Mild Alzheimer Disease: A One-Year Longitudinal Study*, 16 Am. J. Geriatric Psychiatry 209 (2008).

219. See *Jackson v. Indiana*, 406 U.S. 715 (1972).

220. See *Sell v. United States*, 539 U.S. 166 (2003).

221. See, e.g., *United States v. Holman*, 532 F. 2d 284 (4th Cir. 2008).

222. For an overview of the considerable body of case law on this issue, see Michael L. Perlin, 4 Mental Disability Law § 11-4.3 (2d ed. 1989).

## 1. Treatment with medication

The past 50 years have seen the ongoing introduction of new medications for the treatment of mental disorders. Currently, medications are a mainstay in the treatment of schizophrenia and bipolar disorder; indeed, it is a rare patient who can be treated successfully for these disorders without medication as part of the treatment plan.<sup>223</sup> Medications are also used commonly to treat and prevent the recurrence of depression, anxiety disorders, attention-deficit/hyperactivity disorder, and a large number of other conditions.<sup>224</sup> The field of psychopharmacology, as the treatment of mental disorders with medications is known, has become a complex and challenging part of psychiatric practice.

### a. Targets of medication treatment

As a general rule, medications are targeted at the symptoms of mental disorders, which may occur in a large number of conditions, rather than being specific for the treatment of a given disorder. Psychotic phenomena such as delusions and hallucinations, for example, are generally responsive to antipsychotic medications, whether the underlying disorder is schizophrenia or bipolar disorder.<sup>225</sup> Antianxiety medications can be effective in primary anxiety disorders (e.g., agoraphobia) or in anxiety that develops secondary to another condition (e.g., depression).<sup>226</sup> Mood stabilizers, first introduced for bipolar disorder and its variants, can be helpful to some patients with personality disorders that are marked by fluctuations in mood.<sup>227</sup> Medications that aid patients in falling asleep work in many different disorders.<sup>228</sup>

Moreover, the same drug can have multiple effects. The best-known example is the selective serotonin reuptake inhibitors (SSRIs), the first and most famous of which is Prozac (the generic name is fluoxetine).<sup>229</sup> Originally introduced for the treatment of depression, for which they proved effective, SSRIs have since also proved helpful for anxiety, even in the absence of depression.<sup>230</sup> The newer antipsychotic medications, intended to target psychotic symptoms, can also be helpful for mania, even when psychosis per se is absent.<sup>231</sup> Indeed, one of the

223. Minzenberg et al., *supra* note 161; Steven L. Dubovsky et al., *Mood Disorders*, in Hales et al., *supra* note 111.

224. See generally Alan F. Schatzberg et al., *Manual of Clinical Psychopharmacology* (2003).

225. Stephen M. Stahl, Stahl's *Essential Psychopharmacology: Neuroscientific Basis and Practical Applications* 425 (2008).

226. *Id.* at 726.

227. C. Robert Cloninger & Dragan M. Svrakic, *Personality Disorders*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 2236.

228. Stahl, *supra* note 225, at 831–39.

229. Prozac was the first SSRI to be introduced to the market, and its use was widely discussed in popular media, including Peter Kramer's bestseller, *Listening to Prozac* (1993).

230. Norman Sussman, *Selective Serotonin Reuptake Inhibitors*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 3191.

231. Stahl, *supra* note 225, at 689–94.

antipsychotics is often prescribed to aid in sleep, as is one of the newer antidepressants.<sup>232</sup> These multiple effects of a single medication are probably due to their impact on more than one neurotransmitter system.

Another reality of contemporary psychopharmacology is that medications are often used for indications that have not been approved by the Food and Drug Administration (FDA).<sup>233</sup> FDA approval is required for a new medication to be marketed in the United States, and approval is granted only after evidence from clinical trials is presented to the agency demonstrating the efficacy of the drug for a particular purpose, within a given dosage range, and often with a particular population.<sup>234</sup> Once FDA has granted approval for a compound to be marketed, however, physicians are free to prescribe it for any purpose for which they believe it to be indicated, at a dosage of their choosing, and for whichever patients they believe will benefit—although pharmaceutical companies can advertise its use only for FDA-approved purposes. Because approval of a single indication for drug use makes the medication generally available for other purposes as well, and over time drugs lose patent protection, pharmaceutical companies often have little incentive to pursue FDA approval for additional indications.<sup>235</sup> Thus, many medications have long been used for purposes other than the one endorsed by FDA, often with impressive bodies of clinical experience supporting such use.<sup>236</sup>

As is true for many classes of medications, the precise mechanisms of action of most psychopharmacological compounds have not yet been established. Most appear to block or stimulate neuronal receptors in the brain, which trigger or inhibit the propagation of electrical impulses, and it has been assumed that this represents their primary mechanism of action.<sup>237</sup> Indeed, many compounds interact with multiple receptor systems, perhaps accounting for their efficacy against a variety of symptoms, as well as the diverse side effects they produce. But other

232. The antidepressant trazodone is a popular sleep-inducing medication, *id.* at 845; the antipsychotic quetiapine is also used for this purpose, *id.* at 848.

233. David C. Radley et al., *Off-Label Prescribing Among Office-Based Physicians*, 166 *Archives Internal Med.* 1021 (2006).

234. Celia J. Winchell, *Drug Development and Approval Process in the United States*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 2988–96; FDA regulatory information on new drug approvals can be accessed at <http://www.fda.gov/Drugs/DevelopmentApprovalProcess/default.htm>.

235. Steven R. Salbu, *Off-Label Use, Prescription, and Marketing of FDA-Approved Drugs: An Assessment of Legislative and Regulatory Policy*, 51 *Fla. L. Rev.* 181 (1999); Rebecca Dresser, *The Curious Case of Off-Label Use*, 37 *Hastings Center Rep.* 9 (2007).

236. For example, the various formulations of valproic acid are among the most commonly used treatments for bipolar disorder, including maintenance treatment to prevent recurrence. Although an FDA indication was obtained for the treatment of acute mania, long-term maintenance use is “off-label.” Schatzberg et al., *supra* note 224. See also Norman Sussman, *General Principles of Psychopharmacology*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 2972–3.

237. Stahl, *supra* note 225, at 91–122.

mechanisms, such as initiating changes in DNA transcription, are also possible and remain to be fully explored.<sup>238</sup>

b. Categories of medications

Although a large number of medications are used to treat the symptoms of mental disorders, several major categories account for the largest number of prescriptions.

- Antipsychotic medications, first introduced in the 1950s, appear to have selective effects on psychotic symptoms such as delusions, hallucinations, and disordered thoughts.<sup>239</sup> The first generation of antipsychotics, marked by the introduction of chlorpromazine, often caused acute neuromuscular side effects, such as spasms of the muscles, along with a long-term risk of tardive dyskinesia, a condition characterized by involuntary movements of the muscles in the face, trunk, and extremities.<sup>240</sup> A second generation of these medications, introduced in the 1990s with great fanfare, presents lower risks of neuromuscular problems, but several of the most popular members of this group can cause weight gain, along with diabetes, hyperlipidemia, and increased cardiac risk.<sup>241</sup> There does not appear to be a difference in efficacy between the earlier and later medications.<sup>242</sup>
- Mood stabilizers were introduced for the treatment of bipolar disorder, which is characterized by episodic mood swings from mania to depression.<sup>243</sup> The first of these drugs was lithium, whose effect was discovered in the 1940s, but which was not widely adopted in the United States until the 1970s. Lithium can be very effective, but it often causes problematic side effects.<sup>244</sup> Subsequently, a number of medications that are also effective as treatment for seizure disorders were found to have mood stabilizing effects as well, and they are generally better tolerated.<sup>245</sup>

238. *Id.* at 41–89.

239. *Id.* at 425.

240. Irene Hurford & Daniel P. van Kammen, *First-Generation Antipsychotics*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 3105–27.

241. Stephen R. Marder, Irene Hurford, & Daniel P. van Kammen, *Second-Generation Antipsychotics*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 3206–40.

242. Jeffrey A. Lieberman et al., *Effectiveness of Antipsychotic Drugs in Patients with Chronic Schizophrenia*, 353 *New Eng. J. Med.* 1209 (2005); Peter B. Jones et al., *Randomized Controlled Trial of Effect on Quality of Life of Second- vs. First-Generation Antipsychotic Drugs in Schizophrenia: Cost Utility of the Latest Antipsychotic Drugs in Schizophrenia Study (CUtLASS 1)*, 63 *Archives Gen. Psychiatry* 1079 (2006).

243. Stahl, *supra* note 225, at 667–719.

244. James W. Jefferson & John H. Greist, *Lithium*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 3132–45.

245. Robert M. Post & Mark A. Frye, *Carbamazepine*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 3073–89; Robert M. Post & Mark A. Frye, *Valproate*, in Sadock, Sadock, & Ruiz, *supra* note 120 at 3278.

- Antidepressants include the older class of tricyclic compounds, which offered the first effective medication treatment for depression.<sup>246</sup> Again, a less-than-optimal side-effect profile led to efforts to discover alternatives. The SSRI medications turned out to have equal efficacy, but are generally better tolerated.<sup>247</sup> They too, though, have adverse side effects, including diminished sexual function, a numbing of emotional intensity, or increased anxiety.<sup>248</sup> Data suggesting that SSRIs may lead to suicidal ideation in some patients remain controversial, but have led to FDA-mandated “black-box” warnings for the drugs.<sup>249</sup> A group of non-SSRI, but chemically related, compounds has effects and side effects similar to those of the SSRIs, and the medications are often used interchangeably.<sup>250</sup>
- Antianxiety medications, which began with nonspecific sedatives, soon moved on to drugs with targeted effects on anxiety per se.<sup>251</sup> Benzodiazepines, including the well-known Valium and Librium, were used as mainstays of anxiety treatment for many years, but carry liabilities that include the potential for abuse and addiction. Today, the much safer SSRIs and related compounds are the drugs of choice for long-term treatment of anxiety, as they are for depression, with benzodiazepines often reserved for situations in which immediate effects are a priority.<sup>252</sup> Newer agents have been introduced from entirely different chemical classes specifically for anxiety.<sup>253</sup>

This is by no means a complete list of medications for the treatment of mental disorders, but represents a brief introduction to the major classes that are likely to be the focus of evidence presented in legal proceedings.

### c. Polypharmacy

The use of more than one psychiatric medication for a patient—often called “polypharmacy”—is common for several reasons.<sup>254</sup> First, because medications

246. J. Craig Nelson, *Tricyclics and Tetracyclics*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 3259.

247. Sussman, *supra* note 230.

248. *Id.*

249. See FDA guidance at <http://www.fda.gov/cder/drug/antidepressants/default.htm>.

250. These medications include drugs that selectively target the brain’s norepinephrine transporters, the so-called selective norepinephrine reuptake inhibitors (SNRIs), along with medications that appear to act on both serotonin and norepinephrine systems. Michael E. Thase, *Selective Serotonin-Norepinephrine Reuptake Inhibitors*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 3184–90.

251. Steven Dubovsky, *Benzodiazepine Receptor Agonists and Antagonists*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 3044.

252. Stahl, *supra* note 225, at 765–71.

253. See, e.g., Anthony J. Levitt, Ayal Schaffer, & Krista Lancot, *Buspirone*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 3060.

254. Sussman, *supra* note 236.

typically target symptoms rather than underlying disorders, and most disorders present with multiple symptoms, there may be an obvious rationale for the use of more than one agent (e.g., an antidepressant along with a sleep medication for a patient with depression who is experiencing insomnia). Second, some disorders that are imperfectly responsive to a single, initial medication may respond to an augmentation strategy involving the addition of a second medication, often from a different chemical class (e.g., an antidepressant medication can be augmented with lithium, thyroid hormone, or a second unrelated antidepressant).<sup>255</sup>

Although greater efficacy often can be obtained from combined treatment, there are risks as well. Multiplying medications increases the chance of adverse effects from both the individual medications and their interactions.<sup>256</sup> Hence, polypharmacy is best reserved for situations in which documented evidence of benefit exists or a compelling theoretical rationale is present. Failure to apply these principles accounts for the vaguely disreputable connotation that the term “polypharmacy” conveys.

#### d. Side effects

The specific side effects of several classes of medications have been referred to earlier. A general point to be noted, however, is that all medications have side effects, even commonly used drugs that are generally thought of as harmless, such as aspirin or acetaminophen.<sup>257</sup> Prescribers balance the positive effects of medication against the range of possible side effects in making recommendations for treatment to patients, who, of course, retain the right to decide that the adverse consequences do not warrant the possibility of therapeutic gains.<sup>258</sup> It is a reality, however, that the side effects of psychiatric medications limit the tolerability of many drugs, even among people who are benefiting from them. Moreover, some medications may have adverse effects with particular significance in legal settings.<sup>259</sup> These include sedation, which may be associated with antipsychotic or anti-anxiety medications and sometimes with other classes of drugs, and restricted expression of emotion, occasionally experienced with the first generation of anti-psychotic medications. In the absence of previous exposure to a given medication, it is difficult to anticipate the side effects that may arise. Clinicians typically monitor those effects and adjust dosage or change medications accordingly.

255. Charles DeBattista & Alan F. Schatzberg, *Combination Pharmacotherapy*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 3322.

256. Sussman, *supra* note 236.

257. *Id.* at 2684.

258. See generally Jessica W. Berg et al., *Informed Consent: Legal Theory and Clinical Practice* (2001).

259. *Sell v. United States*, 539 U.S. 166 (2003); Dora W. Klein, *Curiouser and Curiouser: Involuntary Medications and Incompetent Criminal Defendants After Sell v. United States*, 13 Wm. & Mary Bill Rts. J. 897 (2005); Debra A. Breneman, *Forcible Antipsychotic Medication and the Unfortunate Side Effects of Sell v. United States*, 539 U.S. 166, 123 S. Ct. 2174 (2004), 27 Harv. J.L. & Pub. Pol’y 965 (2004).

e. Efficacy and effectiveness

Efficacy refers to a medication's ability to reduce or eliminate its target symptoms; effectiveness denotes the extent to which that effect can be achieved in ordinary clinical treatment.<sup>260</sup> An illustration of the difference is evident with antipsychotic medications, the efficacy of which in controlling the positive symptoms of psychosis has been demonstrated in numerous studies.<sup>261</sup> However, in real-world clinical settings, the effectiveness of these medications, particularly over the long term, is substantially limited by patients' reluctance to continue taking them, despite symptomatic relief.<sup>262</sup> This may be due in part to the nature of some mental disorders, especially schizophrenia, given that affected persons often deny their impairments.<sup>263</sup> But there is no question that the side effects of the medications lead many patients to stop them, because of their unwillingness to tolerate the weight gain, lethargy, sexual dysfunction, neuromuscular manifestations, or other side effects that often accompany the use of the drugs.<sup>264</sup> Because demonstrations of efficacy are required for FDA approval to market medications, it can be assumed that drugs for mental disorders are efficacious for their approved indications. However, their effectiveness may be more limited, and this can be an important consideration when predictions of long-term symptom control are called for in both criminal and civil contexts.

## 2. Psychological treatments

Although medications are a mainstay for treatment of serious mental disorders, a variety of psychological treatments may be important as either primary or adjunctive treatments.

a. Psychoanalysis and psychodynamic psychotherapy

Psychoanalysis was developed as a therapeutic technique by Sigmund Freud and is probably the form of psychotherapy that comes first to mind for most lay people.<sup>265</sup> It involves three to four sessions a week for many years, during which patients recline on a couch and free associate, with little direction from the analyst, whose job it is to analyze patients' developing unconscious attachment (or transference) to the analyst. Despite its ubiquity in *New Yorker* cartoons, psycho-

260. Gerard E. Hogarty et al., *Efficacy Versus Effectiveness*, 48 *Psychiatric Servs.* 1107 (1997).

261. Philip G. Janicak et al., *Principles and Practice of Psychopharmacotherapy* 118–27 (1993).

262. Lieberman et al., *supra* note 242.

263. Xavier F. Amador & Henry Kronengold, *The Description and Meaning of Insight in Psychosis, in Insight and Psychosis* 15, 15–32 (Xavier F. Amador & Anthony S. David eds., 1998).

264. Diana O. Perkins, *Predictors of Noncompliance in Patients with Schizophrenia*, 63 *J. Clinical Psychiatry* 1121 (2002).

265. T. Byram Karasu & Sylvia R. Karasu, *Psychoanalysis and Psychoanalytic Psychotherapy*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 2746.

analysis is used with only a tiny percentage of patients, usually those who have less severe disorders, live in major urban centers, and can afford to pay for their own extended care. Efforts to demonstrate the efficacy of psychoanalysis have run into resistance from practitioners and considerable logistical problems; data supporting its use are therefore hard to find.<sup>266</sup> Thus, it is likely to have limited relevance when mental disorders are at issue in legal proceedings.

Psychodynamic psychotherapies, which are offshoots of psychoanalysis, are used more frequently and hence have more relevance to the law.<sup>267</sup> Based on similar notions of a dynamic unconscious, that is, processes out of the awareness of the person affect mood and behavior, psychodynamic therapies generally involve sessions once or twice a week, for periods ranging from months to several years, with patients sitting upright and greater activity on the part of the therapist in identifying conflicts and maladaptive behaviors. As in psychoanalysis, the underlying premise is that when unconscious motivations are made conscious, they become susceptible to control and alteration by the patient.

Psychodynamic therapies are easier to study and have a somewhat more robust set of data speaking to their efficacy—for example, in anxiety and depression.<sup>268</sup> It is often difficult, though, for patients with more severe disorders, such as schizophrenia and bipolar disorder, to tolerate the in-depth exploration and uncovering of intrapsychic conflicts that accompany the therapeutic process. But many patients with personality disorders, depression, and other conditions will attribute their stability to ongoing therapy.

#### b. Cognitive behavioral and related therapies

In contrast to the premises of psychodynamic therapies that mood and behavior are affected by unconscious conflicts, cognitive behavioral therapy (CBT) is based on the idea that conscious patterns of thought determine how one feels and behaves.<sup>269</sup> CBT is generally shorter term (weeks to months), highly structured, and focused on helping patients recognize and control maladaptive patterns of thinking. Patients are often given homework assignments to complete between sessions. A strong database supports its use in anxiety disorders, depression (where it can be as effective as medications and may be more likely to prevent relapse), and for control of some psychotic symptoms, and its use is steadily being extended to additional conditions.<sup>270</sup> Specialized forms of CBT have been developed for use with sex offenders, based on

266. Glen O. Gabbard et al., *The Place of Psychoanalytic Treatments Within Psychiatry*, 59 *Archives Gen. Psychiatry* 505 (2002).

267. Karasu, *supra* note 265.

268. Falk Leichsenring & Sven Rabung, *Effectiveness of Long-Term Psychodynamic Psychotherapy: A Meta-Analysis*, 300 *JAMA* 1551 (2008).

269. Cory F. Newman & Aaron T. Beck, *Cognitive Therapy*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 2857–8.

270. Andrew C. Butler et al., *The Empirical Status of Cognitive-Behavioral Therapy: A Review of Meta-Analyses*, 26 *Clinical Psychol. Rev.* 17 (2006).

a model that is often termed “relapse prevention” that teaches patients to recognize situations that are likely to lead to recidivism and avoid them.<sup>271</sup> Dialectical behavior therapy is an offshoot of CBT that has shown success with patients with borderline personality disorders, an otherwise difficult disorder to treat.<sup>272</sup>

### c. Other psychological therapies

Hundreds of forms of talking therapies have been catalogued, but it would be impossible to review them all here. Many have shown efficacy with particular disorders, and efforts have been made to identify common therapeutic elements, which may include the relationship with the therapist and the ability to instill hope for the future in the patient.<sup>273</sup> In addition to individual therapies, persons with mental disorders may benefit from group therapies of a variety of orientations, including psychodynamic and cognitive.<sup>274</sup> Group therapies can be especially helpful when socialization and relationships with other people are among the person’s problems. Family and couples therapies generally target relationships within the family unit or marital dyad; because mental disorders are often disruptive to relationships, such approaches may be helpful adjuncts to treatments focused on the affected person’s primary disorder.<sup>275</sup> Severely ill patients, including those with schizophrenia, may benefit from what is termed supportive therapy, which involves regular contacts aimed at identifying concrete problems in the person’s life and helping to find solutions. It may also provide a nonthreatening outlet for social interaction when other relationships are limited.<sup>276</sup>

## 3. Treatment of functional impairments

Control of positive symptoms does not necessarily address deficits in function, particularly in the psychotic disorders. What may be required are techniques that focus on functional difficulties per se. Persons with schizophrenia, for example, given that the disorder often affects ability to function socially and occupationally, may need to be taught how to interact with other people, an approach known as social skills therapy.<sup>277</sup> Occupational therapy can provide them with a graded introduc-

271. See, e.g., D. Richard Laws, *Relapse Prevention with Sex Offenders* (1989).

272. M. Zachary Rosenthal & Thomas R. Lynch, *Dialectical Behavior Therapy*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 2884.

273. Jerome D. Frank & Julia B. Frank, *Persuasion and Healing: A Comparative Study of Psychotherapy* (1993).

274. Henry I. Spitz, *Group Psychotherapy*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 2832.

275. Henry I. Spitz & Susan Spitz, *Family and Couple Therapy*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 2584.

276. Peter J. Buckley, *Applications of Individual Supportive Psychotherapy to Psychiatric Disorders: Efficacy and Indications*, in *Textbook of Psychotherapeutic Treatments* (Glen O. Gabbard ed., 2009).

277. Melinda Stanley & Deborah C. Beidel, *Behavior Therapy*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 2795–6.

tion (or reintroduction) to the workplace, with patients taught how to maintain focus and deal with the demands of the work setting.<sup>278</sup> More focal impairments can be addressed, as well. Thus, defendants found incompetent to stand trial can be taught about the nature of the courtroom and the expectations they must meet to be found competent to proceed. Studies of such programs have shown higher rates of restoration of competence than occurs with treatment of the primary disorder alone.<sup>279</sup> Comparable programs are available for anger management,<sup>280</sup> control of spousal abuse,<sup>281</sup> and training in parenting skills,<sup>282</sup> among other areas of function that are often the target of legal proceedings.

#### 4. *Electroconvulsive and other brain stimulation therapies*

The therapeutic effect of seizure induction by electrical or chemical means on psychosis and depression was first demonstrated in the 1930s.<sup>283</sup> Electroconvulsive therapy (ECT) became the most popular of these approaches in the era before efficacious medications existed for mental disorders. The early techniques for ECT involved application of an electrical current to the brain of patients while they were awake. Not only was this often terrifying for the patients, but the resulting violent seizures could cause bone fractures and other complications. Contemporary use of ECT is quite different, with patients anesthetized prior to the procedure and paralyzing agents used to prevent muscular contractions.<sup>284</sup> Although temporary confusion and memory loss often occur, long-term adverse effects are uncommon, making ECT a safe procedure—indeed, for elderly patients with complex medical problems, it may be preferable to the use of medications. Unfortunately, the graphic images associated with early ECT use, embodied in novels and films, dominate the popular mind and often lead to a distorted perception of the treatment.<sup>285</sup>

278. See generally Jennifer Creek, *Occupational Therapy and Mental Health: Principles, Skills and Practice* (2002).

279. See, e.g., Alex M. Siegel & Amiram Elwork, *Treating Incompetence to Stand Trial*, 14 L. & Hum. Behav. (1990); Barry W. Wall et al., *Restoration of Competency to Stand Trial: A Training Program for Persons with Mental Retardation*, 31 J. Am. Acad. Psychiatry L. 189 (2003).

280. Raymond DiGiuseppe & Raymond C. Tafra, *Anger Treatment for Adults: A Meta-Analytic Review*, 10 Clinical Psychol.: Sci. & Prac. 70 (2006).

281. Julia C. Babcock et al., *Does Batterers' Treatment Work? A Meta-Analytic Review of Domestic Violence Treatment*, 23 Clin. Psychol. Rev. 1023 (2004). Note that in contrast to anger management and parenting training, the data on the efficacy of treatment for batterers indicates that effects are limited at best.

282. Kathryn M. Bigelow & John R. Lutzker, *Training Parents Reported for or at Risk for Child Abuse and Neglect to Identify and Treat Their Children's Illnesses*, 15 J. Fam. Violence 311 (2000).

283. Joan Prudic, *Electroconvulsive Therapy*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 3285–3301.

284. *Id.*

285. Ken Kesey, *One Flew Over the Cuckoo's Nest* (1962); the popular movie version appeared in 1976 (see description at <http://www.imdb.com/title/tt0073486/>); Garry Walter & Andrew McDonald, *About to Have ECT? Fine, but Don't Watch It in the Movies: The Sorry Portrayal of ECT in Film*, 21 Psychiatric Times 65 (2004), available at <http://www.psychiatrictimes.com/display/>

ECT is used today primarily for the acute treatment of depression, for which it has been demonstrated to be effective.<sup>286</sup> Although it can also have a therapeutic effect on psychotic symptoms, it is not commonly used for that purpose. An exception involves states of catatonic stupor or excitement, both of which can be life threatening and for which ECT can provide immediate relief.<sup>287</sup> For patients responsive to ECT but not to medications, maintenance ECT (i.e., periodic, perhaps monthly, treatments) can be used.<sup>288</sup> In most cases, though, ECT is reserved for patients who have not responded to one or more medications or whose conditions are sufficiently severe (e.g., acute suicidal urges) that a more rapidly acting intervention than medication—which can take up to 6 to 8 weeks before an effect is seen—is indicated. ECT's history continues to haunt its current use, with many states imposing statutory or regulatory restrictions.<sup>289</sup> However, it can be a safe and effective treatment—and in some cases a life-saving one. The mechanism of effect for ECT remains unclear.

Given that brain function is integrally linked to electrical transmission of impulses between nerve cells, it is not surprising that other efforts have been made to use electrical stimulation for therapeutic purposes. Electrical stimulation of the vagus nerve has been approved by FDA for the treatment of depression, although the supporting data are generally thought to be weak.<sup>290</sup> The therapeutic use of transcranial magnetic stimulation, in which a strong magnetic field is applied externally, is being explored, including for depression, autism, and other disorders.<sup>291</sup> Successful use of implanted devices for deep brain stimulation (DBS) for Parkinson's disease have led to trials of DBS for obsessive-compulsive disorder and depression;<sup>292</sup> further experimentation in other disorders seems likely.

article/10168/48111; C. Lauber et al., *Can a Seizure Help? The Public's Attitude Toward Electroconvulsive Therapy*, 134 *Psychiatry Res.* 205 (2005); Balkrishna Kalayam & Melvin J. Steinhart, *A Survey of Attitudes on the Use of Electroconvulsive Therapy*, 32 *Hosp. Community Psychiatry* 185 (1981); Richard Abrams, *Electroconvulsive Therapy* (1997).

286. Daniel Pagnin et al., *Efficacy of ECT in Depression: A Meta-Analytic Review*, 20 *J. Electroconvulsive Therapy* 13 (2004).

287. Barbara M. Rohland et al., *ECT in the Treatment of the Catatonic Syndrome*, 29 *J. Affective Disorders* 255 (1993).

288. Prudic, *supra* note 283, at 3297.

289. For a review, though now somewhat out of date, see William J. Winslade et al., *Medical, Judicial, and Statutory Regulation of ECT in the United States*, 141 *Am. J. Psychiatry* 1349 (1984). Restrictive regulations appear to reduce the incidence of ECT use in the United States; Richard C. Hermann et al., *Variation in ECT Use in the United States*, 152 *Am. J. Psychiatry* 869 (1995).

290. Although approved by the FDA for use in depression, concern over the weak database for TMS led the Centers for Medicare & Medicaid Services to withhold approval for payment for the procedure. Miriam Shuchman, *Approving the Vagus-Nerve Stimulator for Depression*, 356 *New Eng. J. Med.* 1604 (2007).

291. Philip B. Mitchell & Colleen K. Loo, *Transcranial Magnetic Stimulation for Depression*, 40 *Austral. N.Z. J. Psychiatry* 406 (2006).

292. Helen S. Mayberg et al., *Deep Brain Stimulation for Treatment-Resistant Depression*, 45 *Neuron* 651 (2005); Benjamin D. Greenberg et al., *Three-Year Outcomes in Deep Brain Stimulation for Highly*

## 5. Psychosurgery

Direct surgical intervention to alter brain function in mental disorders has an unfortunate history.<sup>293</sup> Prefrontal leucotomy or lobotomy was developed in the 1930s as a treatment for intractable disorders such as schizophrenia, and became popular in the United States after World War II. Although there was never persuasive evidence of its efficacy, lobotomies were performed in many facilities, often in primitive conditions, on thousands of patients. Consequences frequently included a dulling of sensation and emotion. Interest in lobotomies faded in the late 1950s, because it became clear that the procedures were not having a positive effect, and they are not used today. Surgical interventions are used only rarely for psychiatric disorders, and only then for otherwise untreatable conditions. The most common procedures today involve parallel focal lesions in each of the two halves of the brain, which seems to help intractable and disabling obsessive–compulsive disorder and depression.<sup>294</sup> But psychosurgery for the treatment of psychiatric disorders is, in any form, extremely uncommon.

## 6. Prediction of responses to treatment

In a number of legal contexts, experts are called on to anticipate the responses of persons with mental disorders to treatment. For example, likely effectiveness must be considered before a court orders treatment over objections for a defendant who is incompetent to stand trial,<sup>295</sup> and the probable impact of future treatment may need to be estimated in determining damages in emotional harm cases.<sup>296</sup> The difficulty with these projections relates to several parameters that are inherently challenging to predict:

- *Effectiveness of treatment.* Even highly effective treatments for mental disorders do not work in all cases, and when they do work, they may provide varying levels of relief.<sup>297</sup>

*Resistant Obsessive-Compulsive Disorder*, 31 *Neuropsychopharmacology* 2384 (2006).

293. Elliot S. Valenstein, *Great and Desperate Cures: The Rise and Decline of Psychosurgery and Other Radical Treatments for Mental Illness* (1987).

294. Scott L. Rauch et al., *Neurosurgical Treatments and Deep Brain Stimulation*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 2983–90.

295. *Sell v. United States*, 539 U.S. 166 (2003).

296. Melton et al., *supra* note 28.

297. For example, only 45% to 60% of patients receiving antidepressant medication for uncomplicated major depression show clinically significant responses to the first medication they receive, and of those who fail to respond, a similar percentage will respond positively to a second medication. A. John Rush & Andrew A. Nierenberg, *Mood Disorders: Treatment of Depression*, in Sadock, Sadock, & Ruiz, *supra* note 120, at 1734–9. Rates of response in unselected populations of patients with depression are lower. Madhukar H. Trivedi et al., *Evaluation of Outcomes with Citalopram for Depression Using Measurement-Based Care in STAR\*D: Implications for Clinical Practice*, 163 *Am. J. Psychiatry* 28 (2006).

- *Adherence.* Treatment has no chance of being effective if a person declines to pursue or to continue it, a particular issue in cases where the court lacks control over the person's future behavior.<sup>298</sup> Tolerability of side effects may play an important role in these decisions.
- *Fluctuations in the course and responsiveness of the disorder.* Many mental disorders are chronic, and tend to wax and wane in intensity. Although adjustments in treatment can sometimes bring more severe symptoms under good control, that is not always possible. Moreover, for reasons that are not understood, previously responsive disorders may become resistant to the therapeutic effects of medication.<sup>299</sup>
- *Environmental conditions.* Unpredictable stresses in a person's life may exacerbate symptoms, reduce the effectiveness of treatment, or lead to diminished adherence.

However, given that estimates sometimes must be made of probable treatment effects, there are several indicators to which clinicians can turn.<sup>300</sup> Previous treatment response is the best predictor of future response; it is likely, for example, that someone whose previous delusions have rapidly resolved with antipsychotic medication will have a similar response in the future. In the absence of a documented history of successful treatment, estimates should be based on evidence indicating base rates of response for the person's disorder, along with any specific prognostic factors present in the person's case (e.g., a schizophrenic disorder that develops slowly over many years and that is associated with gradual functional decline generally has a poorer prognosis than one with rapid onset and good premorbid functioning). To a greater or lesser extent, however, it needs to be acknowledged that there is always uncertainty associated with these predictions.

298. Rates of nonadherence to medications among patients with psychiatric disorders are in the range of 50% or more. Although these figures are perhaps somewhat higher than those seen in other chronic conditions, long-term treatment with medication in general is marked by high rates of noncompliance with prescribed medications. Lars Osterberg & Terrence Blaschke, *Adherence to Medication*, 353 *New Eng. J. Med.* 487 (2005).

299. So-called "poop-out" during treatment of depression is a commonly encountered example. See, e.g., Sarah E. Byrne & Anthony J. Rothschild, *Loss of Antidepressant Efficacy During Maintenance Therapy: Possible Mechanisms and Treatments*, 59 *J. Clin. Psychiatry* 279 (1998).

300. See, e.g., for predictors of response to treatment for depression, Stuart M. Sotsky et al., *Patient Predictors of Response to Psychotherapy and Pharmacotherapy: Findings in the NIMH Treatment of Depression Collaborative Research Program*, 148 *Am. J. Psychiatry* 997 (1991); for predictors of response to treatment for schizophrenia, Delbert G. Robinson et al., *Predictors of Treatment Response from a First Episode of Schizophrenia or Schizoaffective Disorder*, 156 *Am. J. Psychiatry* 544 (1999).

## G. Limitations of Mental Health Evidence

Certain limitations exist where mental health evidence is concerned that may not come into play with other types of scientific evidence. Both retrospective assessments of past mental states and prospective estimates of future behavior depend on estimates of variables that are inherently difficult to know with a high degree of certainty. Even contemporaneous assessments of functional abilities depend, in part, on the evaluatee's self-report of such difficult-to-measure attributes as distress, motivation, and judgment. Where empirically validated assessment tools are used, the usual concerns about measurement error are present. Two additional problematic areas involve the use of psychodynamic theory and testimony that speaks to the ultimate legal issue.

### 1. Limits of psychodynamic theory

Psychoanalysis developed a complex theory of the mind that included both functional elements (i.e., ego, superego, and id) and processes by which unconscious motivations are brought to bear on conscious thought and behavior (e.g., displacement, projection, reaction formation), largely in the service of protecting the conscious mind from unbearable conflict.<sup>301</sup> Freud's basic schemata, which underwent evolution even during his lifetime, subsequently have been subject to permutation and elaboration by a large number of theorists. These schemata form the theoretical basis for the dynamic psychotherapies and have been incorporated into popular culture, as reflected in the work of historians, literary theorists, novelists, and cartoonists, among others.<sup>302</sup> However, although these concepts have proven useful in a variety of fields, many of them have been resistant to empirical testing. Even when ample evidence exists to support a psychodynamic construct—e.g., recovery of unconscious, nontraumatic memories<sup>303</sup> or repression<sup>304</sup>—it has been difficult to prove the postulated functional role for the process. Nonetheless, psychodynamic concepts—and the use of psychodynamic therapies—remain mainstays in many psychiatry and psychology training programs. Testimony based on these concepts is often introduced, for example, in discussions of a defendant's mental state at the time of the crime, in relation to defenses of insanity, dimin-

301. William W. Meissner, *Classical Psychoanalysis*, in Sadock & Sadock, *supra* note 120, at 701–46.

302. See, e.g., *Psychoanalytic Literary Criticism* (Maud Ellmann ed., 1994); Peter Loewenberg, *Psychoanalytic Models of History: Freud and After*, in *Psychology and Historical Interpretation* (William M. Runyan ed., 1980).

303. Matthew H. Erdelyi, *The Recovery of Unconscious Memories: Hypermnnesia and Reminiscence* (1996).

304. David S. Holmes, *The Evidence for Repression: An Examination of Sixty Years of Research*, in *Repression and Dissociation: Implications for Personality Theory, Psychopathology, and Health* 85–102 (Jerome L. Singer ed., 1990).

ished capacity, self-defense, provocation, duress, and entrapment.<sup>305</sup> It may also play a role in civil cases, regarding questions as disparate as a parent's capacity to raise a child and whether a testator was subject to undue influence.<sup>306</sup> Because these concepts were generally accepted in the relevant fields, although there have always been skeptics, the test of admissibility under *Frye v. United States* and similar state rules was usually met.<sup>307</sup> The reinvigorated admissibility requirements promulgated under *Daubert v. Merrell Dow Pharmaceuticals, Inc.* and *Kumho Tire Co. v. Carmichael*, with their emphasis on empirical verification of the bases for the expert's testimony, have called the future of testimony based on most psychodynamic concepts into question.<sup>308</sup>

Questions about testimony based on psychodynamic theory can be raised with regard both to the legitimacy of the underlying constructs (e.g., displacement of affect) and to the techniques by which the examiner can know that such a mechanism came into play in a particular case (e.g., the displacement of the defendant's unconscious rage at his mother led to a loss of behavioral control that resulted in an assault on another woman). Slobogin has argued, with regard to criminal defendants, that frankly speculative testimony about psychodynamic influences on the crime should be held to a lesser standard of admissibility than required under *Daubert*.<sup>309</sup> In part, he suggests that the very concepts on which the law relies—such as extreme emotional stress and reasonable apprehension of harm—are themselves not easily susceptible to determinations that would meet *Daubert's* reliability considerations. Thus, if defendants are to be able to introduce evidence that would overcome the presumptions against them, testimony that relies on accepted but inherently unprovable constructs is essential. Moreover,

305. Christopher Slobogin, *Proving the Unprovable: The Role of Law, Science, and Speculation in Adjudicating Culpability and Dangerousness* (2007).

306. *Robertson v. McCloskey*, 676 F. Supp. 351 (D.D.C. 1988) (declining to admit psychodynamic testimony under the *Frye* standard); *United States v. Libby*, 461 F. Supp. 2d 3 n.6 (D.D.C. 2006) (noting that although psychodynamic testimony was not admissible under the *Frye* standard, that does not necessarily hold under *Daubert*, and that "there can be little doubt that today . . . the science of memory is well established and accepted in the scientific community . . . has been well tested and subjected to peer review"); *United States v. Fishman*, 743 F. Supp. 713 (N.D. Cal. 1990) (excluding testimony on "thought reform" theory from a qualified mental health professional).

307. *Frye v. United States*, 293 F. 1013 (1923).

308. *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993); *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999).

309. Slobogin, *supra* note 305, at 39–57. Note that Slobogin's argument is not limited to testimony rooted in psychodynamic concepts, but extends to other mental health evidence that intends to speak to aspects of a person's mental state at some point in the past, knowledge of which is unlikely ever to meet scientific standards of proof. Under the *Daubert* standard, the judge serves as the gatekeeper for scientific testimony. The admissibility of evidence is determined on the basis of relevance and reliability. Reliability factors offered as examples include falsifiability, peer review, the known or potential rate of error, and general acceptance by the relevant scientific community. *Daubert*, 509 U.S. at 593–95.

Slobogin claims that this is, in fact, why trial courts usually resist efforts to exclude mental health testimony.<sup>310</sup>

Granting the legitimacy of Slobogin's analysis, there is still reason for caution in a wholesale embrace of psychodynamic theories. Because persuasive empirical demonstrations of either the concepts themselves or their application in particular cases is unlikely, their speculative—even if plausible—nature should be recognized. Moreover, to say that such testimony should not be held to reliability-based standards of admissibility is not to say that no relevant standards exist. Idiosyncratic concepts and conclusions that would not be generally accepted by clinicians with appropriate training might well run afoul of prevailing rules for admissibility, because they lack support even under the older standard of acceptance in the relevant professional community,<sup>311</sup> and to the extent that techniques are available for generating testable data, they would appear to be preferable. This appears, in fact, to be the way in which courts generally approach such evidence.<sup>312</sup>

## 2. *Ultimate issue testimony*

Whether mental health experts should testify—or be permitted to testify—to the ultimate legal issue in a case has been the subject of longstanding controversy.<sup>313</sup> The question arises, for example, in criminal cases where experts often have commented directly on whether a defendant is competent to stand trial or whether the legal standard for insanity has been met.<sup>314</sup> Similar issues can arise in civil settings, in which experts may be asked to testify directly about a person's capacity to manage affairs or to serve as a custodial parent, or regarding whether a person was competent to sign a contract at an earlier point in time.<sup>315</sup> Some mental health experts find themselves encouraged or pressured by attorneys to draw conclusions about the ultimate issue, and judges have been known to exclude testimony in which experts are unwilling to take that step on the grounds that the evidence that they would otherwise provide lacks probative value.<sup>316</sup> Concerns arise over the fact that conclusions about the ultimate issue in a case are matters to be decided by the factfinder, on whose legitimate territory an expert who speaks to the issue may be encroaching and whose deliberations may be preempted.<sup>317</sup>

310. For a response to Slobogin's argument, see Edward J. Imwinkelried, *The Case Against Abandoning the Search for Substantive Accuracy*, 38 Seton Hall L. Rev. 1031 (2008).

311. *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923).

312. Slobogin, *supra* note 305, at 21–29.

313. See Fed. R. Evid. 704. See Anne Lawson Braswell, *Resurrection of the Ultimate Issue Rule: Federal Rule of Evidence 704(b) and the Insanity Defense*, 72 Cornell L. Rev. 620 (1987).

314. But see discussion below regarding the current prohibition on this practice in federal courts.

315. See Restatement (Second) of Contracts § 15.

316. Appelbaum & Gutheil, *supra* note 149, at 221.

317. Insanity Defense Workgroup, *American Psychiatric Association Position on the Insanity Defense*, 140 Am. J. Psychiatry 681, 686 (1983); American Bar Association, ABA Criminal Justice Standards:

Proponents of ultimate issue testimony often include attorneys and judges, who may be concerned that an expert who provides a clinical formulation without tying it directly to the ultimate legal issue will leave a group of confused jurors unable to discern the connection on their own.<sup>318</sup> Many experts themselves share similar concerns or worry that mental health issues will simply be ignored if their relevance to the legal question at hand is not made clear; moreover, they note that courts have applied such rules erratically.<sup>319</sup> They counter concerns about such testimony having an undue impact on jurors' deliberations by noting that members of juries appear to be little influenced by whether or not ultimate issue testimony is offered by an expert.<sup>320</sup>

Moreover, efforts to restrict testimony on the ultimate issue often quickly run into line-drawing problems. As an example, after a jury found John W. Hinckley, Jr. not guilty by reason of insanity of the attempted assassination of President Reagan, the verdict led to wholesale revision of laws governing the insanity defense at the federal and state levels.<sup>321</sup> Among the changes wrought by the Federal Insanity Defense Reform Act of 1984 was a prohibition on experts directly addressing the question of insanity.<sup>322</sup> The Federal Rules of Evidence were amended to effect this change: "No expert witness testifying with respect to the mental state or condition of a defendant in a criminal case may state an opinion or inference as to whether the defendant did or did not have the mental state or condition constituting an element of the crime or of a defense thereto."<sup>323</sup> Although it seems clear that, according to the terms of the rule, the expert is precluded from opining directly that a defendant lacked criminal responsibility, it is less clear whether the expert could say that the defendant could not "appreciate the wrongfulness of his acts," the language used in the statute to define the relevant standard.<sup>324</sup> And if that, too, were prohibited, could the expert say that the defendant "could not grasp how wrong his behavior was," and if so, would that language be likely to have any different impact on a jury than simply speaking in the words of the statute? Empirical data exist to suggest that the answer to that question is no.<sup>325</sup>

Still, a large number of mental health and legal scholars oppose experts addressing the ultimate legal question, and during the high-pitched debate follow-

Mental Health, Standard 7-6.6 (1984). Note that the APA position was recently withdrawn as outdated and replaced by a briefer statement that does not address the question of ultimate issue testimony.

318. Ralph Slovenko, *Commentary: Deceptions to the Rule on Ultimate Issue Testimony*, 34 J. Am. Acad. Psychiatry & L. 22 (2006).

319. Alec Buchanan, *Psychiatric Evidence on the Ultimate Issue*, 34 J. Am. Acad. Psychiatry & L. 14 (2006).

320. Solomon M. Fulero & Norman J. Finkel, *Barring Ultimate Issue Testimony: An "Insane" Rule?* 15 L. & Hum. Behav. 495 (1991).

321. Henry J. Steadman, *Before and After Hinckley: Evaluating Insanity Defense Reform* (1993).

322. 18 U.S.C. § 17.

323. Fed. R. Evid. 704(b).

324. *Id.*

325. Fulero & Finkel, *supra* note 320.

ing the Hinckley trial, both the American Psychiatric Association and the American Bar Association adopted positions against ultimate issue testimony.<sup>326</sup> In addition to the argument that such testimony trenches on the function of the jury, opponents often point to the legal and moral nature of the question whether someone is criminally responsible.<sup>327</sup> Although mental health expertise may be helpful in determining the person's mental state at the relevant time, determining whether the resulting impairment was sufficient to negate responsibility requires the application of the relevant legal standard and a moral judgment of the fairness or unfairness of punishing the person for his or her behavior. Psychiatrists and psychologists have no particular expertise on legal or moral issues; hence, opponents of ultimate issue testimony urge that they should not be permitted to speak to those issues. Such preclusion may also reduce the much bemoaned "battle of the experts," because a good deal of disagreement may derive from views of how data from the evaluation should be applied to the ultimate legal question, rather than from differences regarding the person's mental state. Although testimony on the ultimate legal issue is now barred in federal courts in insanity defense cases (18 U.S.C. § 17), it remains common in many states, and even in federal jurisdictions it may be offered in other sorts of cases.<sup>328</sup>

## II. Evaluating Evidence from Mental Health Experts

To this point, we have considered the kind of evidence that is likely to be offered by mental health experts and some of the challenges that such testimony presents. The remainder of the chapter addresses those factors that should enter into consideration of the value and impact of such testimony.

### A. What Are the Qualifications of the Expert?

The appropriate qualifications of a mental health professional whose testimony is proffered will depend on the nature of the evidence that will be presented. However, a number of relevant parameters can be identified.

326. Insanity Defense Workgroup, *supra* note 317; American Bar Association, *supra* note 317. See also Grisso, *supra* note 2, at 208; Fulero & Finkel, *supra* note 320, at 496.

327. Mark S. Brodin, *Behavioral Science Evidence in the Age of Daubert: Reflections of a Skeptic*, 73 U. Cin. L. Rev. 867 (2005); Michele Cotton, *A Foolish Consistency: Keeping Determinism Out of the Criminal Law*, 18 B.U. Pub. Int. L.J. 1, 21–23 (2005); Ric Simmons, *Conquering the Province of the Jury: Expert Testimony & the Professionalization of Fact-Finding*, 74 U. Cin. L. Rev. 1013 (2006).

328. Fed. R. Evid. 704. Pennsylvania's law represents a typical formulation: "Testimony in the form of an opinion or inference otherwise admissible is not objectionable because it embraces an ultimate issue to be decided by the trier of fact." Pa. R. Evid. 704.

## 1. Training

Most mental health expert testimony is given by psychiatrists or doctoral-level clinical psychologists. Given the differences in the education and training of each profession, their testimony is not necessarily interchangeable. As a rule, psychiatrists are prepared by their training to speak to the diagnosis of mental disorders, including medical issues that may play a role in a particular case, and to treatment approaches, including psychopharmacological treatment.<sup>329</sup> They should be capable of testifying, within the limits of existing knowledge and the information available to them, regarding the impact of a disorder on a person's behavior and functional abilities. Psychologists' training, in contrast, may provide deeper knowledge of the theoretical and experimental bases for understanding the function of the mind, both normal and abnormal.<sup>330</sup> As a general matter, doctoral-level clinical psychologists will be prepared by their training to provide evidence regarding diagnosis and psychotherapeutic treatment of mental disorders, the results of psychological and neuropsychological testing, and the roots of normal and abnormal behavior.

However, although the core elements of training in psychiatry and psychology may be similar across training programs, the variability is substantial.<sup>331</sup> Moreover, variation in subspecialty (in psychiatry) or specialty (in psychology) training—for example, in geriatric psychiatry or neuropsychology—contributes to further differentiation among experts. Thus, inquiries regarding the specific training afforded an expert may be necessary. This is particularly true when an expert is testifying about topics that would ordinarily fall outside disciplinary boundaries, for example, a psychiatrist discussing the results of psychological testing or a psychologist offering evidence regarding the effect of medication on a person's behavior. The same is true for experts who are testifying beyond the range of their specialty or subspecialty training. In addition, in recent years, expert testimony on mental health issues has been admitted at times from nonpsychiatric physicians and mental health professionals of other disciplines.<sup>332</sup> These include

329. See discussion of psychiatrists' training in Section I.B.1, *supra*.

330. See discussion of psychologists' training in Section I.B.2, *supra*.

331. See, e.g., Khurshid A. Khurshid et al., *Residency Programs and Psychotherapy Competencies: A Survey of Chief Residents*, 29 *Academic Psychiatry* 452 (2005); Committee on Incorporating Research into Psychiatry Residency Training, Institute of Medicine, *Research Training in Psychiatric Residency: Strategies for Reform* 91–132 (Michael T. Abrams et al. eds., 2003); Charles J. Gelso, *On the Making of a Scientist-Practitioner: A Theory of Research Training in Professional Psychology*, S(1) *Training and Education in Professional Psychology* 3–16 (2006); Brendan A. Maher, *Changing Trends in Doctoral Training Programs in Psychology: A Comparative Analysis of Research-Oriented Versus Professional-Applied Programs*, 10 *Psychol. Sci.* 475 (1999).

332. *Campbell v. Metropolitan Prop. & Cas. Ins. Co.*, 239 F.3d 179 (2d Cir. 2001) (professor of pediatrics with substantial relevant publications found qualified to testify on neurological injuries resulting from lead paint exposure); *Carroll v. Otis Elevator Co.*, 896 F.2d 210 (7th Cir. 1990) (experimental psychologist found qualified to give expert testimony on likelihood that product design

social work and nursing, and in the future arguably could include master's-level psychologists, marriage and family therapists, physician assistants, and additional disciplines as well. Specific inquiry into relevant training will probably be needed at least until testimony from such disciplines becomes more widely accepted and their specific qualifications more generally known.

## 2. Experience

Experience is relevant to the qualifications of mental health experts in at least two ways. First, as the Federal Rules of Evidence recognize, experience may substitute for training as a basis for concluding that a witness has special expertise.<sup>333</sup> Many experts in forensic psychiatry and forensic psychology, for example, lack formal training in conducting evaluations of the sort provided in forensic fellowships, because such training programs have become widely available only fairly recently. In addition, formal training is simply unavailable (or at least difficult to acquire) in a number of substantive areas of clinical psychiatry and psychology. For example, most professionals who acquire special knowledge about particular mental disorders will do so by pursuing their interest through reading and following the literature and by means of clinical contact with patients with the disorders, as opposed to formal training. Thus, experience must often be relied upon as a stand-in for more conventional credentials.

The second way in which experience can be material to expert qualifications relates to the attrition of skills and knowledge over time. Mental health professionals often complete their training within several years of their 30th birthdays and may engage in practice, including the provision of expert testimony, over the subsequent four or five decades. Brief exposure to information about a particular disorder<sup>334</sup> or some experience in evaluating and treating the condition may fade from memory several decades later unless reinforced in a direct way. Just as problematic is the possibility that additional knowledge about the condition has

would cause children to press escalator's emergency stop button); *United States v. Withorn*, 204 F.3d 790 (8th Cir. 2000) (trial court properly admitted testimony from midwife on alleged sexual assault on basis of bachelor's degree, some postgraduate work, and clinical experience). *But see* *United States v. Moses*, 137 F.3d 894 (8th Cir. 1998) (social worker lacked expertise to opine that victim of alleged child abuse would suffer trauma from facing the accused abuser in the courtroom).

333. "If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case." Fed. R. Evid. 702 (2000).

334. Although this discussion is framed in terms of a particular disorder, the condition in issue may not constitute a disorder in a formal sense. Rather it may involve a symptom (e.g., auditory hallucinations), a mental state not linked to a specific disorder (e.g., dissociation), or a behavioral propensity (e.g., violent behavior). The argument in this section is generally applicable to all these categories of phenomena.

been gained in the interim, familiarity with which might alter an expert's evaluation or opinion. Training regarding a mental disorder or treatment, therefore, may be a necessary but not sufficient aspect of an expert's qualifications, in the absence of ongoing experience. Indicia of such experience may include evaluating or treating patients with the disorder, teaching trainees how to assess or treat the disorder, systematically reviewing the literature on the disorder, attending continuing education sessions concerning the disorder, and conducting research on the disorder.

Although experience, including ongoing experience, with the condition at issue is important in establishing expertise for the purpose of providing evidence in a case, there is a danger that experience can be overemphasized as a criterion of expertise as well. Assuming a baseline degree of adequate training and some ongoing experience in a field or with a condition, it is not clear that additional experience necessarily enhances an expert's authoritativeness. Experts will sometimes boast of the number of evaluations they have performed of a particular type of evaluatee (e.g., alleged or convicted murderers) or of a given kind (e.g., assessments of competence to stand trial). However, if evaluations are performed inadequately or used as the basis for invalid conclusions, especially if there is no feedback loop to correct the expert's errors, mere experience may only have the effect of reinforcing bad clinical habits. Indeed, studies of diagnostic performance by mental health professionals divided into groups by the duration of their clinical experience have shown no consistent correlation between years of experience and reliability.<sup>335</sup> An explanation for the failure to find a consistent effect of expertise may be that, despite less clinical experience, recently trained clinicians are more familiar with the contemporary diagnostic framework and are less tempted to use their clinical experience as a substitute for generally accepted criteria (e.g., "I know schizophrenia when I see it, regardless of what the criteria say"). It is of interest that few studies have compared the performance of experienced forensic psychiatrists and psychologists to their nonforensic colleagues.<sup>336</sup> Although it might be expected that experts with forensic training would be more sensitive to the unique aspects of forensic examinations discussed above, for example, the importance of maintaining a level of suspicion regarding secondary gain and of confirming the evaluatee's account, when possible, with collateral information, that hypothesis remains to be tested. One small study has shown that forensic psychiatrists may be less susceptible to some kinds of hindsight bias than their clinical

335. Here reliability is being used in its technical sense of agreement across more than one rater. For an example of the failure to find a consistent effect of previous experience, see, e.g., Sean H. Yutzy et al., *DSM-IV Field Trial: Testing a New Proposal for Somatization Disorder*, 152 Am. J. Psychiatry 97 (1995).

336. There are, however, data to suggest, as might be expected, that clinicians with forensic training have higher levels of knowledge regarding relevant legal issues, e.g., Gary B. Melton et al., *Community Mental Health Centers and the Courts: An Evaluation of Community-Based Forensic Services* 43-55 (1985).

colleagues,<sup>337</sup> but additional research would be helpful before firm conclusions are drawn.

### 3. Licensure and board certification

#### a. Licensure

Possession of a valid professional license is usually considered a threshold requirement in the qualification of an expert in legal proceedings. Licensure of physicians (including psychiatrists) is governed by a licensure board in each state.<sup>338</sup> Although criteria may differ somewhat, generally a physician who has graduated from an accredited American medical school, passed a sequence of tests designed to ensure adequate levels of knowledge and clinical judgment,<sup>339</sup> and completed 1 or 2 years of residency training is eligible for full licensure.<sup>340</sup> Prior to that point, a temporary license, allowing practice under supervision, is usually issued. Graduates of medical schools that are not in the United States are usually subject to a different set of requirements, often requiring longer periods of residency training and individual review of qualifications. Once licensure is attained in a state, should a physician desire to acquire a license in another state, the process is variable. Some states will grant such a license fairly easily; others, such as California, will require that the physician take and pass a test of general medical knowledge if a certain period of time (e.g., 10 years in California) has passed since the original sequence of testing was completed.<sup>341</sup>

For clinical psychologists, standards for licensure differ somewhat by state, but generally after completion of an accredited Ph.D. program in the United States (including a 1-year internship), they are required to complete 2 years of clinical work under the supervision of a licensed psychologist and to pass a national licensure examination.<sup>342</sup> Because the states do not restrict the practice of psychotherapy per se, but regulate the use of professional titles instead, an unlicensed psychologist can engage in many aspects of the clinical practice of psychology, including all forms of psychotherapy, but will not be able to use the title of psychologist. For psychologists who are seeking licensure in another jurisdiction, many states will grant reciprocity—that is, they will not engage in an independent

337. Herbert W. LeBourgeois et al., *Hindsight Bias Among Psychiatrists*, 35 J. Am. Acad. Psychiatry & L. 67 (2007).

338. A summary of the requirements for medical licensure in each jurisdiction is available from the Federation of State Medical Boards at [http://www.fsmb.org/usmle\\_eliinitial.html](http://www.fsmb.org/usmle_eliinitial.html).

339. See a description of the tests and the examination process at [http://www.usmle.org/General\\_Information/general\\_information\\_about.html](http://www.usmle.org/General_Information/general_information_about.html).

340. Federation of State Medical Boards, *supra* note 338.

341. Cal Bus. & Prof. Code §§ 2080–99, 2184.

342. Details of requirements in each state can be found at the Web site of the Association of State and Provincial Psychology Boards at <http://www.asppb.net>.

process of reviewing the applicant's credentials, relying instead on the review conducted by the initial licensure board.

b. Board certification

Board certification represents a level of qualifications beyond those required for licensure in either medicine or psychology. Although well-trained, competent psychiatrists may have reasons for not attaining board certification (e.g., examination anxiety that interferes with performance, a career centered on nonclinical research for which clinical board certification is thought to be unnecessary), the tests are designed to be passed by a competent psychiatrist and do not require exceptional levels of clinical skill. Thus, in most cases board certification can be viewed as reflecting attainment of an adequate level of clinical competence to engage in independent psychiatric practice. Whether a court chooses to admit testimony from a psychiatrist who has not been board certified may depend on the reasons why certification has not been achieved and on the specific question(s) that will be addressed in the psychiatrist's testimony.<sup>343</sup>

Professional psychology also has a board certification process, administered by the American Board of Professional Psychology.<sup>344</sup> Certification is only offered in psychology specialties, but these include such general clinical fields as clinical psychology, counseling psychology, and group psychology. As in subspecialty certification in psychiatry, candidates are expected to exhibit advanced competence in the specialty area, defined specifically for each specialty. Board certification is less common among psychologists than among psychiatrists, in part perhaps because the process is more recent.<sup>345</sup> Given this, it is less likely that certification will be applied as a minimum standard for expert testimony in psychology than in psychiatry or other areas of medicine.

343. For examples of the scope of judicial discretion on this issue, see, e.g., *Hall v. Quarterman*, 534 F.3d 365 (5th Cir. 2008) (finding that a state requirement that only a licensed expert may testify in a civil commitment hearing as to mental retardation did not extend to expert testimony on the same topic); *Oberlander v. Oberlander*, 460 N.W.2d 400 (1990) (reversing as abuse of discretion the trial court's exclusion of expert testimony from a psychologist who was licensed in the neighboring state); *Williams v. Brown*, 244 F. Supp. 2d 965 (N.D. Ill. 2003) (finding that psychiatrists who were not board-certified child psychiatrists may nonetheless testify about the condition of juvenile plaintiffs).

344. A description of the process and eligibility requirements for the examination process can be found at [http://www.abpp.org/abpp\\_certification\\_specialties.htm](http://www.abpp.org/abpp_certification_specialties.htm).

345. A recent study suggests that approximately 85% of psychiatrists become board certified in the 8 years following completion of residency training. Dorte Juul et al., *Achieving Board Certification in Psychiatry: A Cohort Study*, 160 Am. J. Psychiatry 563 (2003). In contrast, it was estimated that in 2000 only 3.5% of psychologists had achieved board certification. Frank M. Dattilio, *Board Certification in Psychology: Is It Really Necessary?* 33 Prof. Psychol.: Res. & Prac. 54 (2002).

#### 4. Prior relationship with the subject of the evaluation

A presumption may exist among some attorneys, judges, and jurors that a mental health professional who has had a treatment relationship with the person whose mental state is in question is better qualified to testify about aspects of that mental state than an evaluator who is meeting the person for the first time. The logic seems strong: A professional who has known the person for some period of time, perhaps a substantial one, should be better able to offer conclusions about the person's diagnosis, treatment requirements, and the impact of the person's mental state on the person's function and behavior. Thus, it may seem surprising that the ethics guidelines produced by both the American Academy of Psychiatry and the Law, the leading organization of forensic psychiatrists, and the American Psychological Association's division of forensic psychologists point to problems inherent in such situations.<sup>346</sup> Although neither set of guidelines construes testimony involving current or former patients as unethical, they both have words of caution to offer and discourage clinicians from playing both clinical and expert roles.<sup>347</sup>

The professional literature on this issue, and the ethics guidelines themselves, cite several reasons why having a treating professional perform the evaluation for

346. American Academy of Psychiatry and the Law: Ethics Guidelines for the Practice of Forensic Psychiatry, May 2005, <https://www.aapl.org/ethics.htm>; Committee on Ethical Guidelines for Forensic Psychologists (Division 41 of the American Psychological Association and the American Academy of Forensic Psychology), *Specialty Guidelines for Forensic Psychologists*, 15 L. & Hum. Behav. 655 (1991).

347. The forensic psychiatry guidelines are explicitly discouraging of this practice:

Psychiatrists who take on a forensic role for patients they are treating may adversely affect the therapeutic relationship with them. Forensic evaluations usually require interviewing corroborative sources, exposing information to public scrutiny, or subjecting evaluatees and the treatment itself to potentially damaging cross-examination. The forensic evaluation and the credibility of the practitioner may also be undermined by conflicts inherent in the differing clinical and forensic roles. Treating psychiatrists should therefore generally avoid acting as an expert witness for their patients or performing evaluations of their patients for legal purposes.

American Academy of Psychiatry and the Law: Ethics Guidelines for the Practice of Forensic Psychiatry, Sec. IV (May 2005), available at <https://www.aapl.org/ethics.htm>. In contrast, the forensic psychology guidelines could be seen as being somewhat more permissive:

"D. Forensic psychologists recognize potential conflicts of interest in dual relationships with parties to a legal proceeding, and they seek to minimize their effects.

1. Forensic psychologists avoid providing professional services to parties in a legal proceeding with whom they have personal or professional relationships that are inconsistent with the anticipated relationship.

2. When it is necessary to provide both evaluation and treatment services to a party in a legal proceeding (as may be the case in small forensic hospital settings or small communities), the forensic psychologist takes reasonable steps to minimize the potential negative effects of these circumstances on the rights of the party, confidentiality, and the process of treatment and evaluation."

Committee on Ethical Guidelines for Forensic Psychologists (Division 41 of the American Psychological Association and the American Academy of Forensic Psychology): *Specialty Guidelines for Forensic Psychologists*, 15 Law & Hum. Behav. 655 (1991).

legal purposes may not be prudent.<sup>348</sup> First, offering testimony, even if it is supportive of the patient's legal claim, may interfere with the therapeutic relationship. Not only will it often come as a shock to a patient to hear herself described in diagnostic terms, but details of the treating clinician's view of the patient revealed under both direct and cross-examination may alienate the person from the clinician. The treating clinician, in fact, may be aware of more information that is not relevant to the legal question than an evaluator called in specifically for purposes of providing evidence, and hence may be even more likely to reveal it during testimony. At best, when this happens it impedes the therapeutic process and takes time away from the primary therapeutic goals; at worst, it may lead the person to abandon treatment. This effect is likely to be exacerbated if the testimony is adverse to the patient's legal position.

Second, the underlying assumption regarding the desirability of having the clinician testify may be flawed. That is, although the clinician may have known the person for a long time as a patient, the clinical process may never have required the clinician to collect the type of information that would be relevant to the legal question. Even if that information was discussed, the treating clinician is less likely to have approached it with the degree of caution that a forensic evaluator would be likely to employ or to have attempted to verify the information through collateral sources. Indeed, even after agreeing to participate as an expert witness, a clinician may be unaware of the importance of assessing the veracity of the person's claim or afraid that doing so may lead to strains in the therapeutic relationship.

A third problem is that the clinician, having formed an alliance with the person as a patient, perhaps over a considerable period of time, may feel a natural allegiance to the person and a desire, even if not a conscious one, to support the person's contentions in the case. Thus, presentation of evidence may undergo subtle distortion, or may be subject to conscious manipulation by a clinician who sees his or her role as being the patient's advocate. Fourth, there is an ethical problem when the clinician is subpoenaed to testify over the patient's objection. The preexisting therapeutic relationship was premised on the information that the patient revealed being used for treatment purposes. It places the clinician whose testimony cannot support the person's legal claim in an extremely awkward position to be compelled now to use that information to the patient's detriment.<sup>349</sup>

348. Larry H. Strasburger et al., *On Wearing Two Hats: Role Conflict in Serving as Both Psychotherapist and Expert Witness*, 154 *Am. J. Psychiatry* 448 (1997); Ronald Schouten, *Pitfalls of Clinical Practice: The Treating Clinician as Expert Witness*, 1 *Harv. Rev. Psychiatry* 405 (1993); Stuart Greenberg & Daniel Shuman, *Irreconcilable Conflict Between Therapeutic and Forensic Roles*, 28 *Prof. Psychol.: Res. & Prac.* 50 (1997); Appelbaum & Gutheil, *supra* note 149, at 236–39.

349. Although all states have psychotherapist–patient and/or physician–patient testimonial privilege statutes that limit testimony by treating psychiatrists and psychologists (and often other mental health professionals) without the patient's consent, the exceptions in many of these statutes—including the so-called patient-litigant exception that is invoked when patients place their mental state at issue

Thus, in contrast to what might seem the logical assumption—that the treating clinician is the best qualified person to testify regarding the patient—there are multiple reasons to avoid relying on the treater, and in fact to discourage that person from serving as an expert witness in the case.

## B. How Was the Assessment Conducted?

The reliability and validity of an expert opinion related to mental health issues depends heavily on the manner in which the assessment that forms the basis for the conclusions was conducted.

### 1. Was the evaluatee examined in person?

Given the range of cases in which mental health experts provide testimony and the various questions to which they are asked to respond, situations arise in which the experts are providing evidence without having examined the person about whom they are testifying.<sup>350</sup> Such circumstances may arise when direct evaluation is impossible, for example, in contests over testamentary capacity, where often only after the testator is deceased will a claim regarding the person's capacity be litigated. Other civil litigation in which there may be issues regarding the state of mind of a deceased person include contractual capacity, wrongful death, and medical malpractice claims.<sup>351</sup> Testimony regarding a person who cannot be evaluated directly is less likely to occur in criminal cases, but a highly contentious example occurs in death penalty cases in Texas; defendants have the right to decline evaluation by prosecution experts,<sup>352</sup> but such experts frequently testify on the basis of a hypothetical question that reflects some of the facts regarding the defendants' history and behavior.<sup>353</sup>

in a case—are sufficiently numerous that this situation cannot be ruled out. *Jaffee v. Redmond*, 518 U.S. 1 n.13 (1996); Bruce J. Winick, *The Psychotherapist-Patient Privilege: A Therapeutic Jurisprudence View*, 50 U. Miami L. Rev. 249 (1996).

350. In addition, on some occasions, testimony will provide contextual information for the decisionmaker, for example, how a person in a given situation or with a given disorder would usually respond, without being applied directly to a specific person. John Monahan & Laurens Walker, *Social Authority: Obtaining, Evaluating, & Establishing Social Science in Law*, 134 U. Pa. L. Rev. 477 (1986); John Monahan & Laurens Walker, *Social Science Research in Law: A New Paradigm*, 43 Am. Psychol. 465 (1988).

351. Farnsworth, *supra* note 8, § 3:11. For a case study of the use of postmortem analysis in the USS Iowa explosion investigation, see Charles Patrick Ewing & Joseph T. McCann, *Minds on Trial: Great Cases in Law and Psychology* 129–39 (2006); see also Norman Poythress et al., *APA's Expert Panel in the Congressional Review of the USS Iowa Incident*, 48 Am. Psychol. 8 (1993). See *Moon v. United States*, 512 F. Supp. 140 (D. Nev. 1981) (finding that hospital psychiatrists were negligent in diagnosing as schizophrenic a patient who later committed suicide); *Urbach v. United States*, 869 F.2d 829 (5th Cir. 1989) (finding no medical malpractice where a mental patient on furlough from a VA hospital was arrested and beaten to death in a Mexican prison).

352. *Estelle v. Smith*, 451 U.S. 454 (1981).

353. *Barefoot v. Estelle*, 463 U.S. 880 (1983); *Satterwhite v. Texas*, 486 U.S. 249 (1988).

Conclusions about persons who have not been directly examined may be drawn on the basis of available records, including medical, mental health, police, educational, armed services, and other records; information from informants who have been or are in contact with the person, which may derive from interviews by the expert, prior testimony, depositions, police reports, and other sources; and on some occasions observations by the expert of the person's behavior, for example, in a prison or courtroom setting.<sup>354</sup> Although it may be possible to draw valid conclusions on the basis of such data, conclusions generally are more limited and have a lesser degree of certainty than when a direct evaluation has taken place. The ethics statements of the major forensic psychiatry and forensic psychology organizations offer words of caution about such testimony.<sup>355</sup> There are several reasons why caution is warranted.

Expert knowledge in mental health can be viewed as comprising two components: the knowledge of how to conduct an evaluation to obtain relevant data and the knowledge of how to weigh those data to reach a conclusion.<sup>356</sup> When a direct examination of the person cannot be carried out, the expert must rely on information accumulated by others, sometimes for other purposes. The likelihood

354. Kirk Heilbrun et al., *Third Party Information in Forensic Assessment*, in *Handbook of Psychology*, Vol. 11: Forensic Psychology 69 (Alan M. Goldstein ed., 2003). Testimony offered in capital sentencing contexts without examination of the defendant has been particularly controversial, see, e.g., *Bennett v. State*, 766 S.W.2d 227, 232 (Tex. Crim. App. 1989) (Teague, J., dissenting) (“[W]hen Dr. Grigson testifies at the punishment stage of a capital murder trial he appears to the average lay juror . . . to be the second coming of the Almighty. . . . Dr. Grigson is extremely good at persuading jurors to vote to answer the [future dangerousness] issue in the affirmative.”); “*They Call Him Dr. Death*,” *Time*, June 1, 1981; Rosenbaum, *supra* note 216.

355. The Ethics Guidelines for the Practice of Forensic Psychiatry of the American Academy of Psychiatry and Law (available at <https://www.aapl.org/ethics.htm>) note:

For certain evaluations (such as record reviews for malpractice cases), a personal examination is not required. In all other forensic evaluations, if, after appropriate effort, it is not feasible to conduct a personal examination, an opinion may nonetheless be rendered on the basis of other information. Under these circumstances, it is the responsibility of psychiatrists to make earnest efforts to ensure that their statements, opinions and any reports or testimony based on those opinions, clearly state that there was no personal examination and note any resulting limitations to their opinions.

The comparable guidelines for forensic psychology state:

Forensic psychologists avoid giving written or oral evidence about the psychological characteristics of particular individuals when they have not had an opportunity to conduct an examination of the individual adequate to the scope of the statements, opinions, or conclusions to be issued. Forensic psychologists make every reasonable effort to conduct such examinations. When it is not possible or feasible to do so, they make clear the impact of such limitations on the reliability and validity of their professional products, evidence, or testimony.

Committee on Ethical Guidelines for Forensic Psychologists (Division 41 of the American Psychological Association and the American Academy of Forensic Psychology), *Specialty Guidelines for Forensic Psychologists*, 15 *Law & Hum. Behav.* 655 (1991).

356. Paul S. Appelbaum, *Hypotheticals, Psychiatric Testimony, and the Death Sentence*, 12 *Bull. Am. Acad. Psychiatry & L.* 169 (1984); see also American Psychiatric Ass'n amicus brief in *Barefoot*, *supra* note 215.

that all the data that the expert would have wanted to obtain will be available in such circumstances is remote. This is true even when the data have been generated by another mental health professional, for example, in medical or mental health records, both because that person may not have asked all the questions that the testifying expert would have asked and because all of the person's responses may not have been fully recorded. The intangible aspects of an evaluation, including the person's relatedness, affect, and degree of cooperation, may be especially difficult to convey. Because many of the diagnostic categories require that other possibilities have been excluded first,<sup>357</sup> the absence of pertinent negative information (e.g., the person does not abuse substances) can restrict the ability to make definitive diagnoses. Moreover, to the extent that the data available to the expert have been shaped by someone with an interest in the outcome of the case, as when an expert testifies in sole reliance on information in a hypothetical question that is designed to mirror the defendant's or plaintiff's situation, these problems are compounded.

Thus, the major professional organizations in forensic mental health agree that evidence based on sources other than a direct evaluation of the person should be framed with due regard for its limitations and that those limitations should be made clear in reports or testimony by the expert. Failure to do so may represent unethical behavior on the part of the expert witness<sup>358</sup> and should probably cast doubt on the credibility of the evidence presented.

## 2. Did the evaluatee cooperate with the assessment?

Even when a direct evaluation has taken place, the degree of cooperativeness of the person may affect the validity of the data obtained.<sup>359</sup> Civil plaintiffs and criminal defendants have obvious reasons to distrust experts who are examining them on behalf of adverse parties, and may be less than forthcoming in such interactions. However, even when an evaluation is being conducted by an expert hired by the person's own attorney, his or her cooperativeness may be limited by the symptoms of the disorder. For example, the person who is experiencing paranoid delusions may be suspicious and fearful even of an expert with whom his or her attorney encourages cooperation (indeed, even of the attorney). As a consequence, it is important for the expert to clarify, in the presentation of the evidence and

357. For example, DSM-IV-TR criteria for Major Depressive Episode require both that the symptoms on which a diagnosis is based not be due to the direct physiological effects of a drug (licit or illicit) that has been ingested or to a general medical condition; and that they not be better accounted for by a diagnosis of Bereavement after the death of a loved one. DSM-IV-TR at 356. Other major diagnostic categories carry similar requirements to rule out the possibility that the person's presentation is due to other causes before making the diagnosis in question.

358. For one highly publicized case of a psychiatric expert witness who was expelled from the American Psychiatric Association on these grounds, see Ron Rosenbaum, *supra* note 216; Estelle v. Smith, 451 U.S. 454 (1981).

359. Melton et al., *supra* note 28, at 46.

conclusions based on the evaluation, the extent to which the evaluatee cooperated with the examination process.

### 3. *Was the evaluation conducted in adequate circumstances?*

Mental health evaluations often involve discussions of sensitive material, including histories of abuse, use of illegal substances, sexual practices, intimate fears and fantasies, and potentially embarrassing symptoms. Although some persons may be reluctant to speak freely about these issues with an evaluator whom they barely know—and who may reveal this information in the courtroom—the reassurance that they are talking with a mental health professional often substantially mitigates those concerns.<sup>360</sup> However, when the evaluation takes place in a setting that is less than private, the likelihood of such disclosures is reduced.<sup>361</sup> This is often a problem in correctional institutions, where interviews may take place where guards or other inmates can overhear them. Medical hospitals are another location where privacy may be compromised, with nursing staff or other patients nearby. Even if no one is within earshot, interview sites that are noisy or subject to other distractions may interfere with the evaluatee's ability to attend to the questions and respond accurately; this can be a particular problem for people with mental disorders that may impair concentration and attention. Whenever possible, a competent evaluator tries to obtain a venue that is free of these intrusions, and when it is not possible, the situation should be noted as a limitation on the completeness of the evaluation in the report or testimony.

Attorneys sometimes ask to sit in on the evaluation. Their presence can raise similar concerns, even when they are representing the person being evaluated, because the type of information discussed in a mental health evaluation may be quite different from what a client usually discloses to an attorney.<sup>362</sup> Particularly when the examination is being conducted by an expert for an adverse party, attorneys may be tempted to object to questions or to signal the person regarding their answers. Thus, if an attorney is present, as will sometimes be unavoidable, the ground rules should include having the attorney sit out of the line of sight of the evaluatee and not interrupt the examination. An alternative is to have the evaluation audiotaped or videotaped, a technique that some experts now use routinely. Empirical data on

360. Indeed, a considerable literature exists on the question of whether evaluatees may too easily be induced to speak frankly with someone who is introduced as a mental health professional, but whose role is very different than would obtain in treatment settings and who may reach opinions adverse to the person's interests. See, e.g., Daniel Shuman, *The Use of Empathy in Forensic Evaluations*, 3 *Ethics & Behav.* 289 (1993); Strasburger et al., *supra* note 348; Greenberg & Shuman, *supra* note 348.

361. Melton et al., *supra* note 28, at 47. Distraction can be a particular problem when formal psychological tests are used; see, e.g., Kirk Heilbrun, *The Role of Psychological Testing in Forensic Assessment*, 16 *Law & Hum. Behav.* 257 (1992).

362. Robert I. Simon, "Three's a Crowd": *The Presence of Third Parties During the Forensic Psychiatric Examination*, 27 *J. Psychiatry & L.* 3 (1999); Robert L. Goldstein, *Consequences of Surveillance of the Forensic Psychiatric Examination: An Overview*, 145 *Am. J. Psychiatry* 1234 (1988).

the impact of taping on evaluatees' willingness to be forthcoming are lacking, but experienced forensic examiners have expressed the view that evaluatees rapidly adjust to the recording equipment, with little impact on the evaluation.<sup>363</sup>

A final consideration is the time available for the examination.<sup>364</sup> Time constraints may result from correctional rules (e.g., prisoners are only available during given periods of time), medical illnesses or mental disorders (e.g., the evaluatee has limited strength or attention), or limitations on resources (e.g., the party employing the expert only has funds for a certain number of hours of work). Appropriate duration of a direct examination is difficult to specify for all situations. It is likely to depend on the question being asked, the complexity of the person's history and presentation, and the person's degree of cooperation with the evaluation. Needless to say, the duration of an examination, standing alone, is not a good indicator either of its quality or of the validity of the conclusions that were drawn. However, an expert should be able to assess the time necessary to perform an adequate evaluation and, if sufficient time is not available, should indicate the limitations on the resulting opinions that are offered.

#### 4. *Were the appropriate records reviewed?*

The importance for the evaluator of having access to the person's records will vary somewhat depending on the legal question being addressed, but can often be critical to the validity of the evaluation.<sup>365</sup> When retrospective assessments are being conducted—for example, an evaluation of a defendant's state of mind at the time of a crime that occurred months to years before the examination, or an assessment of a person's capacity to enter into a contract at some distant prior date—reviewing contemporary or nearly contemporary records can provide crucial insights into the person's symptoms and functioning at that time. However, even when contemporaneous function or future behavior is being assessed, having access to available records may still be of great importance. Because distinctions between mental disorders can depend in part on the pattern of symptoms over time, accurate diagnosis often is dependent on having a view of the person's prior psychiatric history.<sup>366</sup> In addition, when malingering is a consideration, as it will frequently be, the consistency of the person's presentation over time can be an important datum in the assessment.<sup>367</sup> And given that past behavior is generally the

363. AAPL Task Force, *Videotaping of Forensic Psychiatric Evaluations*, 27 J. Am. Acad. Psychiatry & L. 345 (1999).

364. Melton et al., *supra* note 28, at 47.

365. Kirk Heilbrun et al., *supra* note 354; see also discussion in Section I.C.3.f, *supra*.

366. Diagnosis and subcategorization of bipolar disorder, for example, is dependent not only on assessing the person's current symptoms—whether manic or depressed—but also on ascertaining whether mania or depression was present in the past if it is not apparent at present. See DSM-IV-TR at 388–89.

367. See generally Section I.C.5, *supra*.

best predictor of future behavior, especially where violence is concerned, knowledge of a person's previous history can be essential for predictions of reasonable accuracy.<sup>368</sup> Thus, regardless of the focus of the evaluation, an effort should be made to obtain all relevant available records.

Which records are relevant will depend somewhat on the nature of the legal question being asked.<sup>369</sup> Whenever possible, records of past mental health evaluations or treatment should be obtained. Medical records often contain information about patients' psychiatric symptoms, alcohol and drug use, and functional levels, and thus can be useful as well. Light can be shed on both patterns of symptoms and functional impairment by educational, work, and military records. Educational records may be especially helpful where disorders of early onset are suspected, and work and military records are often illuminating when occupational disability is at issue. In criminal cases, particularly those involving assessments of the defendant's state of mind at the time of the crime, police records can often be valuable, including interviews with witnesses or the defendant, and the results of physical evaluations—including pictures—of the crime scene. It can be helpful to compare the data obtained by these means with the defendant's own accounts of the episode that led to the arrest. Diaries or other accounts written by the person whose mental state is at issue are sometimes available and, to the extent that they were generated prior to the initiation of legal proceedings, can be enlightening regarding the person's state of mind and motivation, the influence of third parties, and the like. When there has been previous litigation involving the person being evaluated, depositions or transcripts of testimony can be helpful for information about state of mind and factual data.

### 5. *Was information gathered from collateral informants?*

In addition to reviewing records, interviewing informants with relevant data can provide important perspectives on the person being evaluated.<sup>370</sup> Family members and friends, including coworkers, often can report on patterns of behavior indicative of symptoms of mental disorder or of functional impairment. They may know about prior treatment for mental disorders, including hospitalization, or histories of involvement with the criminal justice system. Current or former therapists can share useful impressions of diagnosis and comment on levels of function, although to the extent that their interactions with the person are subsumed under a psychotherapist–patient or physician–patient privilege, and do not fall under one of the exceptions in that jurisdiction, it may not be possible to contact them without the person's consent. Witnesses to an alleged crime or workplace

368. See generally Section I.E.1.a, *supra*.

369. See, e.g., Deborah Giori-Guarnieri et al., *AAPL Practice Guideline for Forensic Psychiatric Evaluation of Defendants Raising the Insanity Defense*, 30 J. Am. Acad. Psychiatry & L. 22 (Supplement) (2002).

370. Heilbrun et al., *supra* note 354.

harassment can similarly round out a picture of the person and help to confirm or disconfirm the evaluator's impressions. Access to collateral informants may be complicated by legal restrictions or, if they are close to the person being evaluated, by their reluctance to speak to an expert working for an adverse party. When contact does occur, the assessor needs to take into account possible distortions by the informant in the service of helping, or sometimes of harming, the interests of the person who is the subject of the evaluation.

## 6. *Were medical diagnostic tests performed?*

Dualistic views of human behavior, in which mind and body are seen as distinctly separate entities, have been rejected by scientists who study thought and behavior, and clinicians who treat mental disorders.<sup>371</sup> The relevant fields, including cognitive science, neuroscience, psychology, psychiatry, and philosophy, now acknowledge the brain as the seat of mentation and behavior, and recognize that all mental phenomena, including abnormal mental states, result from perturbations in the function of the brain. At some level, there must be a physical concomitant of every mental phenomenon, and sometimes the physical influences on abnormal behavior are gross enough to be detected by existing techniques, which may reveal potentially treatable conditions. Thus, identification of the causes of abnormal thought or behavior and formulation of a diagnosis may require an evaluation of the person's physical state, along with the mental state.<sup>372</sup> If there is any reason to suspect that an identifiable general medical disorder lies at the root of the person's condition (e.g., a sudden and unprecedented appearance of symptoms, disproportionate impairment of aspects of cognitive function), medical testing, including EEGs and imaging studies, may be indicated.<sup>373</sup>

371. See, e.g., DSM-IV-TR, *supra*, at xxx, "the term *mental disorder* unfortunately implies a distinction between 'mental' and 'physical' disorders that is a reductionistic anachronism of mind-body dualism." See also Kenneth S. Kendler, *Toward a Philosophical Structure for Psychiatry*, 162 Am. J. Psychiatry 433 (2005).

372. See generally Section I.C.3.e, *supra*.

373. Identification of structural or electrical abnormalities, however, does not necessarily imply that they impaired the person's functioning or were responsible for the person's behavior. For discussion of a well-known case in which this issue was raised, see Stephen Morse, *Brain and Blame*, 84 Geo. L.J. 527 (1996). For a more general discussion of the introduction of findings of abnormalities demonstrated on brain imaging in court, see Dean Mobbs et al., *Law, Responsibility and the Brain*, 5 PLoS Biology 693 (2007). Moreover, as with structural findings, the mere presence of a functional abnormality is not sufficient to establish a causal link to the person's mentation or behavior. Growing legal and neuroscience literatures are being generated on the use of functional imaging data in court. See, e.g., Neal Feigenson, *Brain Imaging and Courtroom Evidence: On the Admissibility and Persuasiveness of fMRI*, 2 Int'l J.L. Context 233 (2006); Hal S. Wortzel et al., *Forensic Applications of Cerebral Single Photon Emission Computed Tomography in Mild Traumatic Brain Injury*, 36 J. Am. Acad. Psychiatry & L. 310 (2008).

### 7. Was the evaluatee's functional impairment assessed directly?

As previously discussed, mental health evidence will often focus on the extent to which a person is capable of performing a particular task or set of tasks, that is, testimony will relate to a person's impairment on one or more functional abilities.<sup>374</sup> Sometimes an evaluator will be able to infer from an examination of the person's mental state and information from other sources whether the person is or was capable of performing the task at hand (e.g., standing trial, returning to work, managing property). However, another option for evaluation exists, namely direct assessment of the relevant function.<sup>375</sup> Where a functional ability that relates to a discrete task or set of tasks is at issue, a competent evaluator should have considered direct assessment of performance on those tasks and be able to explain a decision not use such a technique. It should be noted, though, that conclusions drawn even from direct assessments of function involve a degree of inference. A person claiming occupational impairment as a result of anxiety induced by longstanding harassment on the job, for example, might respond very differently to the demands of a work-related task in the actual workplace compared with the safe confines of a mental health professional's office. Therefore, when actual observation of functional capacity is employed, the evaluator should be prepared to comment on the ecological validity of the test, that is, the degree to which the environment in which the test took place resembled the real-world environment in the person's life.<sup>376</sup> Although observations in very different settings may have some value as part of the broader dataset available in an evaluation, they do not carry the same weight as conclusions reached in environments similar to those at issue in the case.

### 8. Was the possibility of malingering considered?

In almost every mental health evaluation for legal purposes, the person being evaluated has an incentive to exaggerate or confabulate symptoms or to distort the impact of actual symptoms on his or her functional abilities.<sup>377</sup> Thus, the possibility of malingering should be considered by the evaluator in every assessment. Techniques for detecting malingering are described above.<sup>378</sup> Although such

374. See generally Section I.D, *supra*.

375. See Section I.D.2.b, *supra*.

376. Additional issues related to the use of functional tests are discussed in Section II.C, *infra*.

377. There are situations in which the incentive runs in the opposite direction. For example, a defendant facing relatively minor charges for whom an evaluation of competence to stand trial was ordered may have every reason to minimize his or her level of symptoms, preferring to go to trial rapidly rather than spend an extended period of time in a psychiatric facility being treated to restore competence. A second example is a defendant whose risk for violence is being evaluated prior to a bail hearing, who also has a powerful incentive to downplay the presence of risk factors associated with violence and to minimize a past history of violence.

378. See Section I.C.5, *supra*.

techniques are not foolproof, and well-prepared evaluatees can sometimes mislead mental health professionals regarding the existence or severity of disorders, successful malingering over time is a difficult task. However, uncovering distortions of the degree of actual symptoms or exaggerations of their impact is usually more challenging than detecting wholesale invention of disorders that are not present. Competent evaluators should be able to explain how they took into account the possibility of malingering and why they believe that their conclusions are valid and to acknowledge that their degree of certainty can never be absolute.

### *C. Was a Structured Diagnostic or Functional Assessment Instrument or Test Used?*

Notwithstanding the advantages of structured assessment techniques, they raise a set of concerns that must be addressed to determine their relevance to the question at issue and the weight that should be given to their results.

#### *1. Has the reliability and validity of the instrument or test been established?*

Reliability and validity are key concepts in test development.<sup>379</sup> Each contains several subcategories. Reliability refers to the reproducibility of results obtained with a particular test. That is, it is an estimate of the precision of an assessment technique. *Interrater reliability* is a measure of whether different examiners using the same test or instrument with the same subject come out with similar results, an important characteristic for an assessment approach that will be used by many raters. *Test-retest reliability* assesses the stability of results from an instrument or test over time; poor correspondence of results between time periods may indicate either an unreliable technique or a condition subject to periodic changes in status. It is an axiom of test and instrument development that good reliability is a prerequisite for having a valid assessment technique, but does not in itself guarantee validity.

Validity connotes the degree to which an instrument or test yields results that accurately reflect reality. *Construct validity* refers to the extent that an instrument or test reflects the theoretical construct that it purports to measure (e.g., anxiety or depression). Elements of construct validity include *discriminant validity*, which is the degree to which the test distinguishes between related conditions or states, and *convergent validity*, the extent to which the results of this test resemble results of other instruments that assess the same or a similar construct. *Content validity* describes the adequacy or thoroughness with which a test has sampled the variables associated with a given domain (e.g., does a measure of ability to work assess all relevant aspects of a given occupation?). Finally, *predictive validity* denotes

379. For the discussion in the following two paragraphs, see generally American Psychological Association, *Standards for Educational and Psychological Testing* (1999).

the ability of an instrument or test to foretell a person's condition or behavior at some point in the future.

When the results of an evaluation using an instrument or test are offered in evidence, clarification of the extent to which reliability and validity have been demonstrated is an essential aspect of determining admissibility and weight. Indeed, based on its discussion in *Daubert*, when the U.S. Supreme Court referred to the "reliability" of a scientific technique, it was encompassing both reliability and validity as usually understood in the social sciences.<sup>380</sup> Which aspects of reliability and validity are relevant to a particular case will depend on the purpose for which the data from the test are being introduced. For example, if the evidence is addressing change in a person's test results over time, a measure's test-retest reliability becomes crucial. If more than one evaluator was involved, interrater reliability may be key. Discriminant validity will be relevant when two states or conditions must be distinguished from each other and predictive validity when forecasts of future mental state or behavior are being made. Careful evaluators will only use instruments or tests that have had the relevant types of reliability and validity confirmed in peer-reviewed publications and will be prepared to cite such data should questions be raised. Of course, some tests are so widely used over a sustained period that their reliability and validity are generally accepted (e.g., the MMPI-2) and do not ordinarily need to be demonstrated again prior to introducing data based on an evaluation in which they were employed. However, the reliability and validity of some longstanding tests (e.g., the Rorschach ink-blot test) remain controversial,<sup>381</sup> and data even from established tests can be used to reach conclusions of uncertain validity. Thus, novel uses of instruments or tests may also require that their psychometric characteristics for that purpose be demonstrated.

## *2. Does the person being evaluated resemble the population for which the instrument or test was developed?*

Reliability and validity once established are not necessarily universally applicable. If an assessment technique is being used on someone drawn from a different population than the one for which the instrument or test was developed, and the new group is likely to differ in some material way, reliability and/or validity may need to be reestablished. An example with regard to reliability might be the use with a child of an instrument that was developed to measure symptoms of mental disorders in adults.<sup>382</sup> Either the nature of the symptoms that adults experience or

380. *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 589 (1993).

381. Lilienfeld et al., *supra* note 127.

382. The frequently differing presentations of mental disorders in children have led to the development of instruments intended specifically for use in that population. See, e.g., David Shaffer et al., *NIMH Diagnostic Interview Schedule for Children, Version IV (NIMH DISC-IV): Description, Differences from Previous Versions, and Reliability of Some Common Diagnoses*, 39 J. Am. Acad. Child & Adolescent Psychiatry 28 (2000).

the ability of adults to describe their symptoms could be substantially different with children, leading to greater difficulty in applying the instrument or test. Thus, it might be prudent for an evaluator to ascertain that data exist showing good reliability in this new population before using this assessment approach. An example involving validity is the use of predictive scales, such as instruments to assess risk of future violence, with a different group than the one from which the predictive algorithm was derived.<sup>383</sup> Concretely, if a predictive test is based on a criminal, but nonmentally disordered sample, applying it to persons with mental disorders—for whom very different variables may affect their behavior—is dubious in the absence of data demonstrating that it is valid in the latter group and vice versa.

It should be emphasized, however, that reestablishing reliability and validity is only necessary when the original group and the new population are likely to differ in some relevant way. Why an instrument developed in California, for example, would not be as reliable and valid when used in Texas is not at all clear. Moreover, the nature of the instrument or test will play a role. Diagnostic tests are likely to differ in their characteristics across populations only if the disorders or the ways in which they manifest themselves are different, which will not usually be the case. Predictive tests, however, may be more sensitive to cultural, socioeconomic, geographic, and other considerations that could introduce new predictors of future conditions or behaviors into the mix. In addition, tests that involve comparisons with broader populations are said to be “normed” against those groups,<sup>384</sup> and the comparative data (e.g., the evaluatee is in the lowest quartile of performance) may be invalid unless the test is renormed for the group of which the person being evaluated is a member. Thus, whether additional reliability and validity testing is required for a new use, or whether a test must be renormed before being used in this way, is necessarily a fact-specific determination.

### 3. *Was the instrument or test used as intended by its developers?*

Established reliability and validity are necessary but not sufficient to determine whether an instrument or test has yielded reliable and valid results. Unless the assessment approach was applied in the manner intended by the developers, the data on reliability and validity may simply not be applicable to a particular use. Three possible areas of deviation relate to training in, administration of, and scoring of the assessment tool.

#### a. Training

Some instruments and tests are so straightforward in their use that little or no training is required. Reading the instructions accompanying the assessment tool might be

383. See, e.g., John Monahan et al., *The Classification of Violence Risk*, 24 Behav. Sci. & L. 721 (2006).

384. For a good discussion of norming in the forensic context, see Grisso, *supra* note 2, at 56–59.

sufficient. In some cases, though, training may be required to ask the questions properly, especially when followup probing of responses is necessary or when evaluatees are asked to perform tasks that must be conducted in a particular way. Diagnostic instruments, in particular, may have complex “skip-out” rules, that is, procedures for determining when to include or omit certain questions based on the person’s responses to previous questions.<sup>385</sup> When information is acquired at least in part from existing records, rather than from the evaluatee directly, rules may exist for how the information should be identified and abstracted. All of these characteristics of an assessment approach may require elaborate training for proper implementation.<sup>386</sup> Sometimes the training can be acquired from test manuals, but for more complex instruments or tests, face-to-face training with an opportunity to practice administration is necessary. Developers of such instruments or tests may offer such training in 1-day or multiday seminars that professionals can arrange to take.<sup>387</sup> Thus, a key question in assessing data based on an instrument or test is whether proper use requires special training, and if so, whether the assessor was trained in the technique.

#### b. Administration

Even if training was obtained, the reliability and validity of an instrument or test will depend on whether the assessor administered the test in the proper way. Many assessment tools require that questions be asked in a given sequence and that they be phrased in a particular way. After an incorrect response, it may be permissible to ask the question again, but only a certain number of times. Probing of responses may be needed, but only certain probes may be permitted. Some tests are timed, with a given period allotted for the completion of a particular task. Deviations from any of these requirements could make the published data on the psychometric characteristics of the tool inapplicable to its use in a particular instance. Thus, a second crucial question is whether the instrument or test was administered in the same way as it was when its reliability and validity were established.

#### c. Scoring

Assessment tools generally require that evaluatees’ responses be scored in some way. For some instruments and tests, the scoring is simple and self-evident, for example, the number of positive responses is totaled to yield the score for the test, or evaluatees themselves are asked to indicate the severity of their symptoms on a

385. The Diagnostic Interview Schedule, which is widely used in epidemiological studies of mental disorders in the United States, is an example. See a description of the latest version of the instrument at <http://epi.wustl.edu/CDISIV/dishome.aspx>.

386. Indeed, some psychological and neuropsychological tests should be administered only by psychologists trained in their use.

387. The creator of the popular Psychopathy Check List (PCL-R), for example, offers an extensive training program for clinicians and researchers desiring to learn proper administration of the instrument. See the Web site at <http://www.hare.org/training/>.

1-to-7 scale. Or the results could be calculated by a computer program that automatically applies the relevant algorithm, generates statistical data, and even draws comparisons with broader groups, such as the general population or persons with a particular disorder. Often, however, particularly when evaluatees' verbal or narrative responses are elicited, more complex scoring rules exist. An instrument assessing the severity of symptoms, for example, may require the person administering it to categorize responses along a numerical scale,<sup>388</sup> and specific capacity assessment tools frequently require similar judgments to be applied.<sup>389</sup> Published data on the reliability of scoring may indicate that it is possible for an instrument to be scored in the same way by many different raters, but unless the person administering the instrument in this particular circumstance adheres to the usual rules, the results of the evaluation may not be comparable to those that would be obtained by another rater and may be invalid as well. Hence, a third important question when such evidence is introduced deals with whether the rules for scoring responses were properly applied.

#### *D. How Was the Expert's Judgment Reached Regarding the Legally Relevant Question?*

In evaluating testimony from mental health experts, as noted in the preceding sections, their training and the manner in which they conduct their assessments is vital information. However, the value of an expert's opinion also depends on the process by which the data were assessed and a conclusion was reached.

##### *1. Were the findings of the assessment applied appropriately to the question?*

###### *a. Were diagnostic and functional issues distinguished?*

Mental health professionals without experience in performing particular forensic evaluations may fail to recognize that the legal question being asked deals with a person's functional capacity, not with some aspect of their clinical state per se.<sup>390</sup> As a result, they may mistakenly base their opinions on the presence of a particular diagnosis or symptom cluster rather than on the person's capacity to perform in the legally relevant manner. Studies over many years indicate that this has occurred frequently in testimony regarding defendants' competence to stand trial, in which experts often conflated the presence of psychosis with incompetence, and concluded that any psychotic defendant was ipso facto incapable of proceed-

388. *E.g.*, the Brief Psychiatric Rating Scale. See Overall & Gorham, *supra* note 122.

389. *E.g.*, the MacArthur Competence Assessment Tool for Treatment; Thomas Grisso & Paul S. Appelbaum, *MacArthur Competence Assessment Tool for Treatment (MacCAT-T)* (1998).

390. See *Dusky v. United States*, 362 U.S. 402 (1960); Thomas Grisso, *Competency to Stand Trial Evaluations: A Manual for Practice* 1-23 (1988).

ing to trial.<sup>391</sup> Similar problems may occur in hearings on guardianship or contests regarding testimonial capacity, where the person's ability to manage or dispose of assets might be thought incorrectly to turn solely on the clinical question of whether dementia is present, as opposed to the legal issue of whether the person retains the necessary capacities despite his or her condition.<sup>392</sup> This problem may be more likely to occur—and to go undetected—when experts are allowed or encouraged to address the ultimate legal issue in their testimony.<sup>393</sup> When experts are permitted to testify to the ultimate question, the importance of probing their reasoning is magnified.<sup>394</sup> Experts can be asked to identify the relevant functional capacities and to speak directly to the impact of the person's mental state on those capacities.<sup>395</sup> That allows their reasoning processes and the correctness of their assumptions about the relevant functional standard to be tested.

b. Were the limitations of the assessment and the conclusions acknowledged?

Most assessments are imperfect. Evaluatees are less than cooperative. Records are unavailable. Evidence from witnesses is conflicting. Inadequate time is available. Or the evaluator may simply have forgotten to ask about some piece of information that would have been helpful. Experts should be able to identify the limitations of their evaluations, and the possible impact of those less-than-optimal aspects of the assessments. It is unlikely that an expert would be prepared to offer testimony if he or she believed that the limitations rendered the opinions invalid. But competent experts should be able to explain why, despite the limitations (which can occur even in the best evaluations by the most experienced experts), their evaluations were adequate to allow them to draw the conclusions that they intend to present.

A comparable set of limitations can occur when conclusions are drawn and opinions formulated. Just as all assessment tools have error rates, so do expert witnesses, although their rates are difficult to subject to statistical analysis. Errors may be introduced by inadequacies in the data available or the uncertainties inherent in particular determinations, especially predictions of future mental states and behaviors. As noted above, it is often impossible to specify the contingencies that may arise in a person's life that could influence their mental states and actions. Thus, any prediction, no matter how firmly grounded in available data, has a

391. See, e.g., A. Louis McGarry, *Competence for Trial and Due Process Via the State Hospital*, 122 *Am. J. Psychiatry* 623 (1965). More recent studies suggest that this is now a less common problem, as educational efforts among mental health professionals who do such work have had a positive impact. Robert A. Nicholson & Karen E. Kugler, *Competent and Incompetent Criminal Defendants: A Quantitative Review of Comparative Research*, 109 *Psychol. Bull.* 355 (1991).

392. See Parry & Drogin, *supra* note 8, at 149–51.

393. See Section I.G.2, *supra*.

394. See Parry & Drogin, *supra* note 8, at 429–31.

395. Buchanan, *supra* note 319.

degree of uncertainty attached to it that a competent expert should be expected to acknowledge.

c. Are opinions based on valid empirical data rather than theoretical formulations?

From the development of Freud's theories in the late nineteenth and early twentieth centuries until the present, many mental health professionals have based their clinical approaches on psychoanalytically inspired concepts. Some of these concepts have been confirmed scientifically (e.g., the existence of unconscious mental states), whereas others have not (e.g., dreams always represent the fantasied fulfillment of wishes). Although psychoanalytical theories and the psychodynamic psychotherapies that derive from them have declined in popularity in recent decades, many mental health professionals have received psychodynamic training and use the concepts they have learned to assess and treat their patients. Regardless of the possible utility of these theories from a clinical perspective, which is controversial and may depend on the condition being treated, they are arguably more problematic when they serve as the basis for conclusions offered as part of legal proceedings. Nor are psychoanalytical theories the only ones that mental health professionals use; alternative approaches may be based on theories that have a greater or lesser degree of empirical support.

To the extent that expert opinions are introduced to inform the judgments of legal factfinders, it is important for them to be based, insofar as possible, on empirically validated conclusions rather than on untested or untestable theories. That appears to be the import of the U.S. Supreme Court's decision in *Kumho Tire*.<sup>396</sup> As Slobogin plausibly maintains, some legal questions (such as those concerning past mental states) may not easily lend themselves to approaches based on scientific methods, but expert opinions may nonetheless be of assistance to the finders of fact.<sup>397</sup> At a minimum, it would seem fair for an expert to indicate when that is the case, so that the factfinder can make an informed judgment about the appropriate degree of reliance to be had on that opinion. And when empirically tested approaches are available, it would appear to be incumbent on an expert to use them or to be prepared to explain why they were not employed.

396. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999) (holding that the *Daubert* standard for admitting expert testimony also applies to nonscientists).

397. Christopher Slobogin, *supra* note 305.

### III. Case Example

#### *A. Facts of the Case*

John, a 25-year-old Army veteran who saw combat in Iraq, had begun to have anomalous experiences in the 4 years since his discharge from active duty. At first, he believed that people were staring at him, though he was not sure why. Later, he came to the conclusion that they thought he was a drug addict or a criminal, ideas confirmed when he heard voices coming through the walls of his apartment, which he attributed to the neighbors, saying, “He’s using drugs” and “He steals things.” To avoid people’s stares, John left his apartment less often, spending most of his time listening to loud music, which helped to drown out the voices. He also found that alcohol made it easier to ignore the voices, and began to drink up to a gallon of wine each day.

One evening when the voices were particularly loud and insistent, he began banging on the walls of his apartment and yelling that he would kill the neighbors if they did not stop talking about him. Thirty minutes later, the police arrived to take him to the local Department of Veterans Affairs (VA) hospital, where he was admitted to the psychiatric unit. Over the course of his hospitalization, he received antipsychotic medication and participated in group therapy. By the end of his hospital stay, although he still wondered whether people were staring at him oddly, he no longer heard people’s voices making derogatory statements about him. He denied having thoughts of hurting himself and other people. When asked whether he would continue taking his medication and would attend outpatient sessions, he said he would. Fourteen days after admission, John was discharged to outpatient care.

Immediately after discharge, John stopped his medication, and he never saw his outpatient therapist. As he became more suspicious of his neighbors, he again began to hear them talking about him, and he resumed drinking several bottles of wine each day to deal with the situation. Three weeks after discharge, while he was on his way to the grocery store to pick up more wine, a passerby accidentally bumped into John. Reacting with fury, John pummeled the older man with his fists, then began beating him with a broomstick that he found on the sidewalk nearby. It took four people who lived in nearby buildings to pull John off his victim.

In the wake of the assault, the victim brought suit against the VA for negligence in John’s treatment. The suit alleged that VA mental health staff should have known that John was dangerous as a result of his mental disorder and not fit for discharge. Damages were claimed as a result of physical injuries and the development of PTSD.

### *B. Testimony of the Plaintiff's Expert on Negligence*

At trial, the plaintiff introduced testimony from a board-certified forensic psychiatrist, Dr. A, who was 20 years out of residency training and had not directly treated patients for the past 13 years. Dr. A had reviewed the medical records of John's treatment and the police records of the assault, but he had not examined John directly. On direct examination, he testified that John had a diagnosis of schizophrenia, with a number of risk factors for violence, including having killed enemy combatants in Iraq, excessive alcohol consumption, and delusions of persecution. It was Dr. A's opinion that the VA treatment team had failed to abide by the standard of care because they had not used a structured violence risk-assessment instrument to determine John's dangerousness. Moreover, although they had obtained a CT brain scan that had shown frontal lobe injury from an old automobile accident, the team had failed to recognize that this constituted an additional risk factor for violence. However, Dr. A believed that, even on the basis of the available information, at the time of hospital discharge it was reasonably foreseeable that John would be violent, and thus he should not have been allowed to leave the hospital.

### *C. Questions for Consideration*

1. Given that Dr. A had devoted himself entirely to forensic evaluations and had not actually treated a patient for 13 years, should he have been considered qualified to offer opinions about whether John's evaluation and treatment had conformed to the standard of care?
2. How reliable were Dr. A's conclusions regarding John's diagnosis and likelihood of committing an act of violence, given that he did not examine John or speak directly to anyone who had been in contact with him, but relied solely on hospital and police records?
3. What information would be needed to determine whether the failure to use a structured violence risk-assessment tool should be considered evidence of negligence? What information would be needed to determine whether the alleged failure to recognize the relationship between CT evidence of frontal brain damage and the risk of violence should be considered evidence of negligence?
4. Is the assertion that John's violence was reasonably foreseeable sufficient to establish a prima facie case for the plaintiff? If not, what type of data should Dr. A have presented to support his testimony?

### *D. Testimony of the Plaintiff's Expert on Damages*

A second expert, Dr. B, a clinical psychologist in general clinical practice, offered testimony on the mental health consequences of the assault. Dr. B had been treat-

ing the victim prior to the assault and had been seeing him weekly for cognitive behavioral therapy since the assault. She testified that the patient described having intrusive thoughts about the attack, nightmares, difficulty concentrating, and startle responses when people came near him without his having noticed them. He also felt overwhelming anxiety walking down the street where the attack had occurred. Dr. B diagnosed the victim as suffering from PTSD and had used a structured assessment tool to help make the diagnosis. On cross-examination, she admitted that she had only seen three or four cases of PTSD in her 5 years of practice and that the diagnosis was based entirely on the victim's report of his symptoms. Although she had not considered the possibility that the victim was malingering, she considered it very unlikely. Because of his symptoms, she concluded to a reasonable degree of psychological certainty that he was disabled from working in his job as a middle manager for a utility company. On cross-examination, she admitted that she did not know exactly what his job entailed and had not determined how each of his symptoms might interfere with his work—but she nonetheless believed that normal work performance was not possible given his condition.

### *E. Questions for Consideration*

1. Should Dr. B be qualified as an expert with regard to the damages suffered by the plaintiff?
2. To what extent should the following considerations affect the weight given to Dr. B's testimony:
  - a. Dr. B had been treating the plaintiff prior to the attack, and continued to treat him afterward.
  - b. Dr. B has seen only three or four cases of PTSD in her practice.
  - c. Dr. B's diagnosis was made on the basis of the patient's self-report, without corroboration from collateral informants, and she had not considered the possibility that he might be malingering.
3. What information regarding the structured assessment tool that was used in making the diagnosis of PTSD would be needed to determine whether the results of the assessment should be admissible?
4. Was an appropriate evaluation done with regard to the extent of the victim's work disability? If not, what additional information should have been obtained and by what means? Should the testimony as offered have been admissible?

## References on Mental Health Diagnosis and Treatment

- American Psychiatric Association, *American Psychiatric Association Practice Guidelines for the Treatment of Psychiatric Disorders: Compendium 2006* (2006).
- American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders DSM-IV-TR* (4th ed. Text Rev. 2000).
- American Psychiatric Publishing *Textbook of Clinical Psychiatry* (Robert E. Hales et al. eds., 5th ed. 2008).
- Kaplan and Sadock's *Comprehensive Textbook of Psychiatry* (Benjamin J. Sadock et al. eds, 9th ed. 2009).
- Alan F. Schatzberg et al., *Manual of Clinical Psychopharmacology* (6th ed. 2007).
- Stephen M. Stahl, *Essential Psychopharmacology: The Prescriber's Guide* (3d ed. 2009).

## References on Mental Health and Law

- Paul S. Appelbaum, *A Theory of Ethics for Forensic Psychiatry*, 25 *J. Am. Acad. Psychiatry L.* 233 (1997).
- Paul S. Appelbaum & Thomas G. Gutheil, *Clinical Handbook of Psychiatry and the Law* (4th ed. 2007).
- Deborah Giorgi-Guarnieri et al., *American Academy of Psychiatry and the Law Practice Guideline for Forensic Psychiatric Evaluation of Defendants Raising the Insanity Defense*, 30 *J. Am. Acad. Psychiatry L.* S1 (2002).
- Thomas Grisso, *Evaluating Competencies: Forensic Assessments and Instruments* (2d ed. 2002).
- Gisli H. Gudjonsson, *The Psychology of Interrogation and Confessions* (2003).
- Glenn J. Larrabee, *Forensic Neuropsychology: A Scientific Approach* (2005).
- Gary B. Melton et al., *Psychological Evaluations for the Courts: A Handbook for Mental Health Professionals and Lawyers* (3d ed. 2007).
- Douglas Mossman et al., *American Academy of Psychiatry and the Law Practice Guideline for the Forensic Psychiatric Evaluation of Competence to Stand Trial*, 35 *J. Am. Acad. Psychiatry L.* S3 (2007).
- Mental Disorder, Work Disability, and the Law* (Richard J. Bonnie & John Monahan eds., 1997).
- John Monahan, *The Scientific Status of Research on Clinical and Actuarial Predictions of Violence*, in *Modern Scientific Evidence: The Law and Science of Expert Testimony* (David L. Faigman et al. eds., 2007).
- Michael L. Perlin, *Mental Disability Law, Civil and Criminal* (2d ed. 2002).

- Retrospective Assessment of Mental States in Litigation: Predicting the Past (Robert I. Simon & Daniel W. Shuman eds., 2002).
- Richard Rogers, *Clinical Assessment of Malingering and Deception* (3d ed. 2008).
- Christopher Slobogin, *Proving the Unprovable: The Role of Law, Science, and Speculation in Adjudicating Culpability and Dangerousness* (2006).
- Robert M. Wettstein, *Treatment of Offenders with Mental Disorders* (1998).