5. Diagnosis

As a biopsychosocial assessment battery for people entering substance abuse treatment, the GAIN is designed to help clinicians and researchers make diagnostic impressions about participants based on DSM-IV-TR (APA, 2000) criteria. In this chapter we will review the use of the GAIN for supporting the diagnosis of substance related disorders, other axis 1 disorders, and a full 5-axis diagnosis. As stated earlier, the GAIN is a self-report; it should be combined with other information and interpreted by an appropriately trained clinician. If you are doing a computer assisted personal interview (CAPI) or administering the paper version then data entering the information, the GAIN software will report both the diagnosis based on self reports and the diagnostic impressions recorded by the clinical staff member in the GAIN's Supplemental Diagnosis Section (XDIAG).

5.1 Diagnosis of Substance Related Disorders

"Substance Related Disorders" is the general description of drug and alcohol diagnostic criteria and it is an independent line on a rank with Schizophrenia, Mood Disorders and other classes in Axis 1 of DSM-IV-TR (APA, 2000). "Substance Related Disorders" is broken down into "Substance Use Disorders" and "Substance Induced Disorders." The first of these two terms describes the criteria necessary to make a diagnosis of "Dependence" or "Abuse." The second describes the criteria necessary to diagnose disorders such as intoxication, withdrawal, and a number of psychiatric syndromes such as dementia, psychoses, delirium, mood disorders and others caused by the effects of intoxicants, either directly or in withdrawal. DSM-IV and DSM-IV-TR embed "Substance Induced Disorders" along with the syndromes they cause. For example, Substance Induced Dementia is described in the section on Dementia, and Substance Induced Mood Disorder is described in the Mood Disorders section. Note that starting with version IV of the DSM, the distinction of "Organic Brain Syndromes" was dropped because of the belief that all psychiatric syndromes have organic/biologic determinants or consequences. We focus below on the diagnosis of substance use disorders and how they are related to substance induced disorders.

Terminology and Relationship to the GAIN. Exhibit 5-1 compares the verbatim criteria for dependence and abuse from DSM-IV-TR (APA, 2000) with the primary GAIN question associated with each criteria. A response of "yes" to these questions is typically sufficient for making a diagnosis "by report," but may not be necessary. For example, an adolescent may not report being in trouble with the law, but his parent may report three prior drug-related arrests that would be sufficient for a clinician to consider this criteria as being met. Both the GAIN and Exhibit 5-1 also include additional questions related to substance induced health and emotional problems, as well as other common early indicators of substance use problems that may suggest the need for further probing if the core items are not endorsed. Together, these symptoms form the GAIN's Substance Problem Scale (SPS) - a dimensional scale of severity. As with all GAIN scales, the symptoms are presented in order of increasing severity/rarity. The more items endorsed, the more severe the problem. When multiple criteria are met, the order of precedence is dependence, abuse, problems. Below are brief descriptions of

each of these conditions.

- Dependence: These are symptoms suggesting that, as a consequence of use, the participant's body has been physiologically changed; that the participant is losing control of his/her own body and behaviors and that substance use activities are displacing normal activities, relationships and responsibilities. They suggest the need for treatment and the high likelihood of relapse in response to physiological conditions (e.g., withdrawal, cravings) and environmental cues (e.g., classical conditioning or situations that trigger cravings).

- Abuse: These are symptoms suggesting that substance use activities are causing episodic problems and/or role failures that are interfering with the participant's life. When criteria are not met for dependence, there are still sufficient reasons to initiate treatment and indicate the high likelihood of relapse in response to stress (e.g., arguments, distress from physical illness, distress of mental illness or trauma), environmental contingencies (e.g., operant conditioning or pressure from peer groups), and risk of developing dependence.

- Problems: These are substance-induced disorders and other problems associated with substance dependence and abuse. When the criteria are not met for dependence or abuse but these problems exist, further assessment is strongly recommended to verify that the participant understood the questions and/or that there were not some kind of special circumstances that need to be taken into account (e.g., temporary abstinence due to pregnancy or being in a controlled environment).

It should be noted that while the order of these symptoms is correlated with severity, there is considerable variation in their presentation. Some amount of tolerance (a symptom of dependence), for instance, is often one of the earlier symptoms to appear while repeated problems with the law (an abuse symptom) occurs early in some participants and late in others. Thus, a participant can have dependence and still be functional at home, school or work. Conversely, first time offenders referred to treatment from the court system actually have lower substance use severity on average then those who seek treatment on their own, but typically have other more severe behavioral/legal problems.

The questions for substance use disorders are initially collapsed across substances in the GAIN because many participants use multiple substances. For them, acknowledging a symptom or problem is often faster, easier, and more reliable than attributing the problem to a specific substance. This is particularly the case for a person using multiple substances and/or whose pattern of use has changed over time. This said, it is often useful clinically either at the time of the assessment or during the subsequent weeks to attempt a more a more detailed diagnosis. The following sections provide more detail on accomplishing this and assume that you have already administered the S9 Detailed Substance Use Worksheet according to the guidelines presented earlier in the chapter 3.

Exhibit 5-1. Crosswalk from DSM IV-TR Criteria to GAIN

DSM-IV-TR Criteria	Primary GAIN question from S9
General screening questions (use diagnosis below if possible, if not check other information or probe later)	
GAIN-Quick	c. you tried to hide that you were using alcohol or drugs?
GAIN-Quick	d. your parents, family, partner, co-workers, classmates or friends complained about your alcohol or drug use?
GAIN-Quick	e. you used alcohol or drugs weekly?
Substance induced psychological problems	f. your alcohol or drug use caused you to feel depressed, nervous, suspicious, uninterested in things, reduced your sexual desire or caused other psychological problems?
Substance-induced health problems	g. your alcohol or drug use caused you to have numbness, tingling, shakes, blackouts, hepatitis, TB, sexually transmitted disease or any other health problems?
For "Substance Abuse," participant must <u>NOT</u> meet criteria for dependence, and must meet one or more of the following:	
A1. Recurrent substance use resulting in failure to fulfill major role obligations at work, school, or home	h. you kept using alcohol or drugs even though you knew it was keeping you from meeting your responsibilities at work, school, or home?
A2. Recurrent substance use in situations in which it is physically hazardous	j. you used alcohol or drugs where it made the situation unsafe or dangerous for you, such as when you were driving a car, using a machine, or where you might have been forced into sex or hurt?
A3. Recurrent substance-related legal problems	k. your alcohol or drug use caused you to have repeated problems with the law?
A4. Continued substance use despite social or interpersonal problems caused or exacerbated by use	m. you kept using alcohol or drugs even though it was causing social problems, leading to fights, or getting you into trouble with other people?

Exhibit 5-1. Continued

DSM-IV-TR Criteria	Primary GAIN question from S9
"Substance Dependence" requires 3 or more of the following 7 criteria from DSM-IV-TR (APA, 2000):	
D1. Tolerance, as defined by either of the following: (a) a need for markedly increased amounts of the substance to achieve intoxication or desired effect, or (b) markedly diminished effect with continued use of the same amount of the substance.	n. you needed more alcohol or drugs to get the same high or found that the same amount did not get you as high as it used to?
D2. Withdrawal, as manifested by either of the following: (a) the characteristic withdrawal syndrome for the substance, or (b) the same (or closely related) substance is taken to relieve or avoid withdrawal symptoms.	p. you had withdrawal problems from alcohol or drugs like shaking hands, throwing up, having trouble sitting still or sleeping, or that you used any alcohol or drugs to stop being sick or avoid withdrawal problems?
D3. The substance is often taken in larger amounts or over a longer period that was intended.	q. you used alcohol or drugs in larger amounts, more often or for a longer time than you meant to?
D4. There is a persistent desire or unsuccessful effort to cut down or control substance use	r. you were unable to cut down or stop using alcohol or drugs?
D5. A great deal of time is spent in activities necessary to obtain the substance, or recovering from its effects	s. you spent a lot of time either getting alcohol or drugs, using alcohol or drugs, or feeling the effects of alcohol or drugs (high, sick)?
D6. Important social, occupational or recreational activities are given up or reduced because of substance use	t. your use of alcohol or drugs caused you to give up, reduce or have problems at important activities at work, school, home or social events?
D7. The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by use.	u. you kept using alcohol or drugs even after you knew it was causing or adding to medical, psychological or emotional problems you were having?

Source: Column 1 is from the American Psychiatric Association. (2000). Diagnostic and statistical manual of mental disorders (DSM-IV-TR) (4th - text revision ed.). Washington, DC: Author.

Detailed Diagnoses. It is also clinically important to identify whether a participant's substance use disorder(s) are being caused by one or multiple substances, particularly when multiple substances have been used in the past year. Exhibit 5-2 provides a crosswalk from the 11 main DSM-IV-TR alcohol and drug categories to the 14 main GAIN categories. Note that tobacco abuse/dependence and caffeine intoxication are not included here because they are not normally sufficient for admission to a substance abuse program, are not generally part of state reporting requirements and are handled in section R of the GAIN. The detailed worksheet will allow you to identify which of the 11 substance categories in DSM-IV-TR appear to be related to the criteria reported. Where criteria for dependence or abuse can be met for multiple substances, multiple diagnoses should be given. Where criteria for dependence are met overall, but not for any single drug, then and only then should "304.80 Polysubstance dependence" be used. Note that this term is often misused to indicate people who use poly substances (e.g., a speedball, karachi) – however, these should be coded under the individual substances or "other" substance columns.

It is also desirable to specify the presence or absence of "physiological symptoms" in the diagnosis because of its importance for predicting withdrawal, cravings and relapse. This occurs when the criteria for dependence are met and there is evidence of tolerance (criterion 1; GAIN question s9n) or withdrawal (criterion 2; GAIN question S9p). Thus, in the bottom of the worksheet you will classify each of the 11 substances with sufficient symptoms as one of the following (in descending order or precedence):

1. Dependence w/Physiological Symptoms (Symptoms n or p and 3 + total symptoms in n-u for the substance)

2. Dependence w/out Physiological Symptoms (3+ Symptoms in rows n-u for the substance)

3. Abuse (1+ symptoms in h-m for the substance)

Note that the DSM-IV-TR rules create a diagnostic orphan when someone reports 1-2 symptoms of dependence and no symptoms of abuse. In this case there is technically no diagnosis. But in most cases there is sufficient other information in the GAIN or full assessment to complete the diagnosis. Some other key questions to review include, reports of use in specific situations that are hazardous or constitute role failure (S2w), past week withdrawal symptoms (S3), evidence of prior treatment episodes (S7), use in spite of acute medical (P3, P6, P10) or psychological (M1, M2, M3) problems, drug related illegal activity (L3), drug related arrests (L5). The reports of parents or other collaterals are also much more likely to identify role failure, changes in behavior/mood, and repeated problems with the law.

Exhibit 5-2 . Crosswalk of DSM IV Diagnostic Codes to GAIN

DSM -IV-TR Substance Use Diagnoses	GAIN Substance(s) in S2
303.90 Alcohol Dependence 305.00 Alcohol Abuse	S2a. Any kind of alcohol (such as beer, wine, whisky, gin, scotch, tequila, rum, or mixed drinks)
304.40 Amphetamine Dependence 305.70 Amphetamine Abuse	S2p. "Speed," "uppers," amphetamines, methamphetamine, ecstasy, MDMA or other stimulants (such as Biphetamine, Benzedrine, crystal, Desoxyn, Dexedrine, ice, Methedrine or Ritalin)
304.30 Cannabis Dependence 305.20 Cannabis Abuse	S2c. Marijuana, hashish, blunts or other forms THC? (herb, reefer, weed)
304.20 Cocaine Dependence 305.60 Cocaine Abuse	S2d. Crack, smoked rock or free base cocaine S2e. Other forms of cocaine
304.50 Hallucinogen Dependence 305.30 Hallucinogen Abuse	S2m. Acid, LSD, ketamine, special K, mushrooms or other hallucinogens (such as mescaline, peyote, psilocybin or shrooms)
304.60 Inhalant Dependence 305.90 Inhalant Abuse	S2f. Inhalants or huffed (such as correction fluids, gasoline, glue, lighters, or spray paints)
304.00 Opioid Dependence 305.50 Opioid Abuse	S2g. Heroin or heroin mixed with other drugs S2h. Nonprescription or street methadone? S2j. Pain killers, opiates, or other analgesics (such as codeine, Darvocet, Darvon, Demerol, Dilaudid, "Karachi," OxyContin, OXYS, Percocet, Propoxyphene, morphine, opium, Talwin, or Tylenol with codeine).
304.90 Phencyclidine Dependence 305.90 Phencyclidine Abuse	S2k. PCP or angel dust (Phencyclidine)
304.10 Sedative, Hypnotic, or Anxiolytic Dependence 305.40 Sedative, Hypnotic, or Anxiolytic Abuse	S2n. Anti-anxiety drugs or tranquilizers (such as Ativan, Deprol, Equanil, Diazepam, Klonopin, Meprobamate, Librium, Miltown, Serax, Valium or Xanax) S2q. "Downers," "sleeping pills," barbiturates or other sedatives (such as Dalmane, Donnatal, Doriden, Flurazepam, GHB, Halcion, liquid ecstasy, methaqualone, Placidyl, "quaalude," Secobarbital, Seconal, Rohypnol or Tuinal
304.80 Polysubstance Dependence	See text, reported by drug.
304.90 Other Substance Dependence 305.90 Other Substance Abuse	S2r. Some other drug (Please describe) (such as amyl nitrite, cough syrup, nitrous oxide, Nyquil, "poppers" or Robitussin)

Source: Column 1 based on American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders (DSM-IV-TR)* (4th - text revision ed.). Washington, DC: Author.

Once a participant has a lifetime history of dependence, DSM-IV-TR (APA, 2000) provides six course specifiers that should be used. These all assume lifetime dependence (3+ lifetime symptoms in S9n-u) and are paraphrased below in descending order of precedence.

1. In a Controlled Environment is defined for a person who is in an environment with no access to drugs such as a therapeutic community, locked psychiatric ward, or prison. (44+ on GAIN S2x "days in controlled environment")

2. On Agonist Therapy: Defined as no criteria present for abuse or dependence for at least one month but the person is taking methadone, L-Alpha-Acetyl-Methadol or analgesics on a prescribed and controlled basis. (44+ on GAIN S7e5 "days in methadone treatment")

3. Sustained Full Remission: Defined as no criteria for abuse or dependence have been met for more than 12 months. (No past-year symptoms in S9h-u)

4. Early Full Remission: Defined as no criteria for abuse or dependence have been met for at least one month, but have been met within the past 12 months. (No past-month symptoms in S9h-u)

5. Sustained Partial Remission: Defined as some criteria (1 or 2) for dependence have been met but not enough for a diagnosis. (1-2 past-year symptoms in S9n-u)

6. Early Partial Remission: Defined as one criteria for abuse or dependence has been met for at least one month but not more than 12 months. (1-2 past-month symptoms in S9h-u)

The first two specifiers are used to highlight reasons why the number of problems or frequency of use are lower than what might otherwise be expected. Question S7 includes information on the history of treatment with methadone, LAAM or other opioid treatment over the participant's lifetime and past 90 days, whether the participant is taking any medications for alcohol or drug problems, whether the participant is currently in treatment, and for how long the participant has been in treatment. Such medications should also be part of the treatment record and/or a referral from another provider and should certainly be known by the participant.

For a "controlled environment" specifier, the check above refers to the general/combined time in any controlled environment where the participant could not use alcohol or drugs (S2x). In the course of doing the whole assessment you may find further evidence that the participant has been in several types of control environments, including: detoxification (S5a), hospital, inpatient or residential programs (S7a2), physical health hospitals (P11g), inpatient mental health treatment (M5g), supervised or institutionalized housing (E1), and time in jail, prison or juvenile detention (L6c-f). Because participants might have gone from one institution to another (e.g., hospital to jail to inpatient treatment), the GAIN also asks about "total" time in places where "you could not come and go as you pleased" (E2f). Note that while time in a controlled

environment suppresses the rate of use, it does not eliminate it. Despite the prohibitions and constraints, some participants will still explicitly report some use in jails, treatment programs, hospitals and virtually all controlled environments.

Withdrawal. In general, someone in an extreme state of withdrawal (and intoxication) is going to be referred to a detoxification or medical unit before the GAIN is done or will be screened out during the initial cognitive screener. However, people may come in while still high (e.g., a heroin addict who has used within the last four hours) and be at significant risk for withdrawal. Withdrawal requires recent cessation of use after a prolonged period of heavy use (criteria A), a set of overlapping substance-specific symptoms (criteria B), that these symptoms cause significant distress or impaired social or occupational functioning (criteria C) and that the symptoms are not better understood solely as a result of another medical or psychological condition. Substance-specific symptom patterns have been defined by DSM-IV-TR (APA, 2000) for Alcohol (p. 216), Amphetamines (p. 228), Cocaine (p. 246), Opioids (p. 273), and Sedative, Hypnotic, or Anxiolytic drugs (p. 289). However, a substance specific withdrawal diagnosis is not defined in DSM-IV-TR for Cannabis, Hallucinogens, Inhalants, PCP, or other drugs. DSM does not say what to do for the latter group or where multiple substances have been used together (which may present atypical patterns) - each of which occur relatively frequently. Complicating matters further, no data for adolescents were considered when developing these patterns. To address these gaps, the GAIN collects all of the DSM-IV-TR symptoms of withdrawal across all substances. Asking the symptoms across substances is also useful because it saves time and because participants often have difficulty attributing their symptoms to a specific substance when more than one is involved. Exhibit 5-3 provides a crosswalk between DSM-IV withdrawal symptoms (which vary by substance) and the GAIN withdrawal scale items in S3. The cells further indicate which of the substance specific criteria the symptom/item maps onto.

Exhibit 5-3. Crosswalk of DSM-IV-TR substance specific and general withdrawal symptoms with GAIN Current Withdrawal Scale

DSM-IV-TR symptom	If the participant cut down, tried to stop or stopped... When you did this, did you have any of the following withdrawal symptoms or problems?	Alcohol (p.216)	Sed./Hyp./Anx. (p.289)	Cocaine (p.246)	Amphetamine (p.228)	Opioid (p.273)	Cannabis (n.d.)	Hallucinogen (n.d.)	Inhalant (n.d.)	PCP (n.d.)	Other (n.d.)
psychomotor retardation	1. Move and talk much slower than usual			(b5)	(b5)						
Yawning	2. Yawn more than usual					(b7)					
Fatique	3. Feel tired			(b1)	(b1)						
vivid, unpleasant dreams	4. Have bad dreams that seemed real			(b2)	(b2)						
insomnia or hypersomnia	5. Have trouble sleeping, including sleeping too much or not being able to sleep	(b3)	(b3)	(b3)	(b3)	(b9)					
dysphoric mood	6. Feel sad, tense or angry					(b1)					
Anxiety	7. Feel really nervous or tense	(b7)	(b7)								
psychomotor agitation	8. Fidget, pace, wring your hands or have trouble sitting still	(b6)	(b6)	(b5)	(b5)						
hand tremors	9. Have shaky hands	(b2)	(b2)								
grand mal seizures	10. Have convulsions or seizures	(b8)	(b8)								
increased appetite	11. Feel hungrier than usual			(b4)	(b4)						
nausea or vomiting	12. Throw up or feel like throwing up	(b4)	(b4)			(b2)					
Diarrhea	13. Have diarrhea					(b6)					
muscle aches	14. Have muscle aches					(b3)					
lacrimination or rhinorreha	15. Have a runny nose or eyes watering more than usual					(b4)					
autonomic hyper-activity; pupillary dilation, piloerections or sweating	16. Sweat more than usual, have your heart race or have goose bumps	(b1)	(b1)			(b5)					

Exhibit 5-3. Crosswalk of DSM-IV-TR substance specific and general withdrawal symptoms with GAIN Current Withdrawal Scale

DSM-IV-TR symptom	If the participant cut down, tried to stop or stopped... When you did this, did you have any of the following withdrawal symptoms or problems?	Alcohol (p.216)	Sed./Hyp./Anx. (p.289)	Cocaine (p.246)	Amphetamine (p.228)	Opioid (p.273)	Cannabis (n.d.)	Hallucinogen (n.d.)	Inhalant (n.d.)	PCP (n.d.)	Other (n.d.)
fever	17. Have a fever					(b8)					
transient visual, tactile or auditory hallucinations or illusions	18. See, feel or hear things that are not real	(b5)	(b5)								
general symptom of withdrawal	19. Forget a lot of things or have problems remembering	GEN	GEN	GEN	GEN	GEN	GEN	GEN	GEN	GEN	GEN
criteria c	20. Have any of these withdrawal problems kept you from doing social, family, job or other activities	C	C	C	C	C	C	C	C	C	C
general symptom of withdrawal	21. Use the same or another drug to stop or avoid having any of these withdrawal symptoms	GEN	GEN	GEN	GEN	GEN	GEN	GEN	GEN	GEN	GEN
general symptom of withdrawal	99. Some other problem **(Please describe)**	GEN	GEN	GEN	GEN	GEN	GEN	GEN	GEN	GEN	GEN

n.d.: Substance specific withdrawal symptoms not defined yet.
GEN General symptom
Source: Adapted from the American Psychiatric Association (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: Author

Substance Induced-Disorders. One of the most significant shifts in DSM-IV was in the treatment of co-occurring conditions which might be either "substance induced" or independently caused. In the past, earlier DSM versions had recommend detoxifying a participant and keeping them off substances for six weeks or more and only treating these other conditions if they did not go away. DSM IV and DSM-IV-TR now recommend treating co-occurring conditions and checking later to see if they go away as treatment is withdrawn. There are two major reasons for this reversal. The first is humanitarian - rapid and effective treatment is available to relieve many of the symptoms (e.g., depression, anxiety, behavioral disorders). The second reason is practical – failure to relieve the symptoms may prevent recovery, increase the likelihood of relapse, and/or make the participant more difficult to treat (e.g., untreated attention deficit disorder or impulse control problems). By substance, the main substance-induced disorders recognized in DSM-IV-TR (APA, 2000; p.193) are:

- Alcohol - persisting dementia, persisting amnestic, psychotic, mood, anxiety, sexual dysfunction and sleep disorders;
- Amphetamines - psychotic, mood, anxiety, sexual dysfunction and sleep disorders;
- Cannabis - psychotic and anxiety disorders;
- Cocaine - psychotic, mood, anxiety, sexual dysfunction and sleep disorders;
- Hallucinogens - psychotic, mood, and anxiety disorders;
- Inhalants - persisting dementia, psychotic, mood, and anxiety disorders;
- Opioids - psychotic, mood, sexual dysfunction and sleep disorders;
- Phencyclidine (PCP) -psychotic, mood, and anxiety disorders;
- Sedatives, Hypnotics or Anxiolytics - persisting dementia, persisting amnestic, psychotic, mood, anxiety, sexual dysfunction and sleep disorders;

All of the above drugs are also associated with substance-induced delirium during intoxication and two (alcohol, sedatives/hypnotics/anxiolytics) are associated with substance-induced delirium during withdrawal. Determining whether these conditions are due to substance use goes beyond the scope of this (or any) one time assessment and requires time, observation, and clinical judgement.

5.2 Supporting Other Axis 1 Disorders

The GAIN also includes check boxes, text statements (via the GAIN-Recommendation and Referral Summary or GRRS discussed further below) and code (via the Individual Clinical Profile or ICP discussed further below) to created diagnosis impressions from the self-reported pattern of symptoms. Below is a list of the other Axis I conditions that can be identified (criteria and page numbers in [brackets]).

(Other) Substance Related Disorders

- **Rule out 304.90 Substance Dependence with other information** [13+ days of use in S2d1, p16, and 3+ Sx in S9c-u, p35]
- **305.10 Nicotine Dependence w/Physiological Sx. [(3**+ Sx in R4n-u) & (n or p), p49]
- **305.10 Nicotine Dependence w/out Physiological Sx. [(3**+ Sx in R4q-u), p49]
- **Rule Out 305.10 Nicotine Dependence** [R4a GT 12, p39]

Mood Disorders

- **296.90 Major Depressive Disorder (MDD**) [(5+ symptoms on M1a2, M1b1, M1b2, M1b3, M1b4, M1b5, M16, M1b7, M1b8, M1b9, M1b10, M1c2, M1d3) and (1+ symptoms on M1b1, M1b6, M1b8), p53]
- **Rule out 296.90 Mood Disorder** [5+ Sx in M1b or 3+ Sx in M1c & M1f GT 12 or M1g > 1, p53]

Anxiety Disorders

- **300.02 Generalized Anxiety Disorder (GAD)** [(3+ symptoms on M1a2, M1a4, M1b3, M1b6, M1b7, M1d3, M1d11) and (M1d1=1) and (M1d12=1), p53]
- **Rule out 300.00 Anxiety Disorder** [5+ Sx in M1d & M1f GT 12 or M1g > 1, p53]
- **Rule out 309.81 Posttraumatic Stress Disorder, 308.30 Acute Stress Disorder or other disorder of extreme stress** [5+ Sx in M2a-p or M2q = 13+ Days, p54]

Disorders Usually First Diagnosed in Infancy, Childhood or Adolescence

- **314.00 Attention Deficit Hyperactive Disorder - Inattentive Type** [(6+ Sx M3a1-9 & 1+ in M3c, p42-3) or (M3d =2), p56]
- **314.01 Attention Deficit Hyperactive Disorder - Combined Type** [(6+ Sx M3a1-9 & 6+ Sx M3a10-18 & 1+ in M3c, p42-3) or M3d=1, p56]
- **314.01 Attention Deficit Hyperactive Disorder - Hyperactive Type** [(6+ Sx M3a10-18 & 1+ in M3c) or M3d =3, p42-3, p56]
- **312.80 Conduct Disorder, Severe** [9+ Sx in M3b1-15, M3b17-19 and 1+ days in M3c, p56]
- **312.80 Conduct Disorder** [3+ Sx in M3b1-15, M3b17-19 and 1+ days in M3c, p56]

Other Axis I Disorders

- **Rule out 300.81 Somatoform Disorder** [4 Sx in M1a & M1f GT 12 or M1g > 1, p53]
- **Rule out 296.90 Mood Disorder, 300.00 Anxiety Disorder , or 300.81 Somatoform**

Disorder [13+ Sx in M1a-d, M1f GT 12 or M1g > 1, p53]

- **312.31 Pathological Gambling** [5+ Sx in V9a-k, p89]

Like any initial diagnosis, these should be treated as provisional. Symptoms of ADHD, for instance, could also be substance induced or caused by other things like petti mal seizures. Thus, these reports should be combined with other available information and interpreted by a qualified clinician.

5.3 Axis 2, 3, 4 and 5 Diagnoses

Axis 2 Personality Disorders. The GAIN only screens for the presence of severe personality problems and does not try to differentiate specific diagnoses. Thus, there is no "check box" for hand scoring. The GRRS and ICP, however, will generate one of two statements related to personality disorders:

- **Rule out 301.70 ASPD and/or 301.83 BPD** [(3+ Sx in M3b1-15 & 1+ days in M3c, p57) or (3+Sx in M4z1-3 or M4z>0, p57), and (16+ in M4a-x, p57)] and

- **Rule out 301.90 Personality Disorder NOS** [(16+ in M4a-x, p57) or (3+Sx in M4z1-3, p57), or (M4z>0, p57)]

While they are still experimental for individuals, the GAIN's personality complexity scale is divided into three subscales based on earlier work by Chestnut Health Systems (2001). The subscales for three personality clusters (and their associated DSM-IV's axis II diagnoses) are listed below.

- **Cautious Personality Index (CPI) for Cluster A** (Paranoid, Schizoid, and Schizotypal personality disorders) that characterizes people who often appear odd or eccentric.

- **Impulsive Personality Index (IPI) for Cluster B** (Anti-social, Borderline, Histrionic, and Narcissistic personality disorders) that characterizes people who often appear dramatic, emotional, or erratic and have a hard time picking up on social cues.

- **Worrying Personality Index (WPI) for Cluster C** (Avoidant, Dependent and Obsessive-Compulsive personality disorders) that characterizes people who often appear anxious or fearful.

The questions in M4z are related to cutting, burning and other forms of self-mutilation. While most prototypical of BPD or other cluster B diagnoses, it is important to realize that these behaviors may represent important problems even if they are below the clinical threshold for a diagnosis. Besides the obvious risk of harm to self, others may also quickly imitate such behaviors in treatment (particularly adolescents).

Axis 3 Biomedical Conditions that Might Complicate Treatment. The GAIN includes a general health screener for the past year (question P3) and the past 90 days (P9), checks for disabilities (P4), pregnancy (P5), infectious diseases (P6), and lifetime histories of medical problems by ICD-9 (P10). There are also questions related to spreading infections through needle use and sexual behaviors, contraceptive use, and participation in prevention/testing programs. In addition to reporting back specific medical problems, the ICP red flags several interactions between substance use and health problems, including:

- Use of Alcohol [S2a>2 or S2a1>0] may exacerbate health problems related to Hepatitis [P6a>0]
- Use of Alcohol [S2a>2 or S2a1>0] may exacerbate health problems related to Pregnancy [P5b=5]
- Use of Alcohol [S2a>2 or S2a1>0] may exacerbate nervous system problems [S3a=1 or P10d=1]
- Use of Analgesics (heroin, methadone, other pain killers) [S2g>2 or S2h>2 or S2j>2 or S2g1>0 or S2h1>0 or S2j1>0 may exacerbate dental problems [P10b=1]
- Use of Analgesics (heroin, methadone, other pain killers) [S2g>2 or S2h>2 or S2j>2 or S2g1>0 or S2h1>0 or S2j1>0] may exacerbate health problems related to injuries [P10c=1]
- Use of Analgesics (heroin, methadone, other pain killers) [S2g>2 or S2h>2 or S2j>2 or S2g1>0 or S2h1>0 or S2j1>0] may exacerbate skeletal problems [P10q=1]
- Use of Analgesics (heroin, methadone, other pain killers) [S2g>2 or S2h>2 or S2j>2 or S2g1>0 or S2h1>0 or S2j1>0 p14] may exacerbate skin problems [P10r=1]
- Use of any drug [S2s1a<90] may exacerbate health problems related to Pregnancy [P5b=5]
- Use of Crack [S2d>2 or S2d1>0 p14] may exacerbate breathing problems [P10f=1]
- Use of Crack [S2d>2 or S2d1>0 p14] may exacerbate health problems related to Tuberculosis [P6b>0]
- Use of Marijuana [S2c>2 or S2c1>0] may exacerbate breathing problems [P10f=1]
- Use of Marijuana [S2c>2 or S2c1>0] may exacerbate health problems related to Tuberculosis [P6b>0]
- Use of Sedatives [S2q>2 or S2q1>0] may exacerbate nervous system problems [S3a=1 or P10d=1]
- Use of Stimulants (cocaine, crack, amphetamines, other stimulants) [S2d, S2e, or S2p >2 or S2d1 or s2e1 or S2p1>0] may exacerbate endocrine (diabetes, thyroid) problems [P10h=1]
- Use of Stimulants (cocaine, crack, amphetamines, other stimulants) [S2d, S2e, or S2p >2 or S2d1 or s2e1 or S2p1>0] may exacerbate heart/blood problems [P10e=1]
- Use of Stimulants (cocaine, crack, amphetamines, other stimulants) [S2d, S2e, or S2p >2 or S2d1 or s2e1 or S2p1>0 p14] may exacerbate nervous system problems [S3a=1 or P10d=1]
- Use of Tobacco [R4>2 or R4a>0] may exacerbate breathing problems [P10f=1]
- Use of Tobacco [R4>2 or R4a>0] may exacerbate health problems related to Pregnancy [P5b=5]
- Use of Tobacco [R4>2 or R4a>0] may exacerbate health problems related to Tuberculosis [P6b>0]

Axis 4 Psycho-Social Stressors. The GAIN has questions targeted specifically at the major psychosocial stressors identified in DSM-IV (see E10 and E11). The ICP checks for these as well as a variety of other major sources of stress, including:

- Academic problems [(B2a<19) & (V1b=>2 or V1b=99)]
- Any substance use among peers [E6d or E7d >1]
- Any Substance use by others in living situation [E5d >0 or E2e >0]
- Arrested in the past 90 days [L5c >0]
- Birth or adoption of a new family member [E10_1]
- Death of a family member or close friend [E10_4=1]
- Discrimination in community, work, school or transportation [E11_5=1]
- Fights with boss/teacher or co-workers/classmates [E10_5=1]
- Financially support self from illegal activity [L3w = 1+/90 Days]
- Hard work or school schedule [E11_3=1]
- Health problem of family member or close friend [E10_2=1]
- Illegal activity among peers [E6b or E7b > 0]
- Illegal activity in living situation [E5b >0]
- In jail, detention or prison in the past 90 days [L6c or f >0]
- Interruption or loss of housing, job, school or transportation [E11_7=1]
- Involved in illegal activity [L3v = 1+/90 days]
- Isolated from other people in living situation and peer groups [E5 + E6 + E7 < 2]
- Lifetime History Acute/Traumatic Victimization [4+ Sx in E9a-r]
- Lifetime history of combat exposure [V4a=1]
- Lifetime history of victimization [1+ Sx in E9a-d]
- Major change in housing or bad housing [E11_1=1]
- Major change in relationships (marriage, divorce, separations) [E10_3=1]
- New job, position or school [E11_2=1]
- No high school degree or GED [(B2a>19) & (V2_1 & V2_2 = 0)]
- Not close to anyone who has been to treatment before [E5f & E6f & E7f = 4]
- On parole [L7_7 =1]
- On probation [L7_4 =1]
- Other changes or problems in family or primary support groups [E10_99=1]
- Other CJ system involvement [(L7_1-3, 5-6 or 8-99) =1]
- Other environmental demands [E11_99=1]
- Participant DCFS Involved [B2b =7]
- Probation or parole violations in the past 90 days [L5v >0]
- Problems with transportation [E11_4=1]
- Special or alternative education program [(B2a <19, p7) & (V1a)= 1)]
- Substance related arrest in the past 90 days [L5r, s or t >0]
- Threat of losing current housing, job, school or transportation [E11_6=1]
- Weekly fighting among peers [E7e > 0]
- Weekly fighting in living situation [E5e >0]
- Weekly illegal activity [L3v = 13+/90 days]

- Weekly intoxication among peers [E6c or E7c > 1]
- Weekly intoxication by others in living situation [E5c > 1 or E2d > 12]
- Weekly substance use by others in living situation [E2e >12]
- Currently pregnant [P5b1=5]
- Uncertain if currently pregnant [P5b1=4]
- Successful pregnancy within the past year [P5a1 <5 and P5b1=1]
- Miscarriage within the past year [P5a1 <5 and P5b1=2]
- Abortion within the past year [P5a1 <5 and P51b=2]
- Pregnancy within the past year [P5a1 <5 and P5b1=6]
- Had low birth weight baby within the past year [P5a1 <5, P5b1=1, P5c1<5 pounds]

Axis 5 Ratings. After the participant's responses have been reviewed, the clinician will also make three ratings of the participant's functioning using the main and two provisional scales of DSM-IV's Axis 5:

- **Global Assessment of Functioning (GAF, Exhibit 5-4)** to rate the participant's functioning in terms of mental health/illness (e.g., danger to self, cognitive impairment, symptom severity, degree of remission), including substance use disorders. Some programs substitute the Children's General Assessment Form (CGAF; Shaffer et al., 1996) rating scale for the GAF.

- **Global Assessment of Relational Functioning (GARF, Exhibit 5-5)** to rate the participant's functioning in terms of the quality of their core relationships, interaction and problem solving with family members and other very close friends (e.g., negotiating skills, communications, conflict resolution, boundaries), including the emotional climate in which they live (e.g., caring, mutual respect, satisfactory sexual relations); and

- **Social and Occupational Functioning Assessment Scale (SOFAS; Exhibit 5-6)** to rate the participant's functioning in terms of their ability to meet social and occupational expectations (e.g., hygiene problems, isolation, inappropriate interactions, problems, ability to interact/perform according to expectations in social, school and work settings).

Each scale goes from 1 to 100, with 1 being low functioning and 100 high functioning. The use of "0 - inadequate information" should only be used if there are major data quality problems. While related, past research has demonstrated that functioning in these three areas can vary considerably (i.e., someone who is physiologically dependent, but still able to perform at home, work or school). Within a given program, however, participants at intake will often be clustered in a narrow range on each scale by design of the placement process (e.g., the lowest functioning will end up in psychiatric, medical or short-term detoxification; the next higher in inpatient; the next in intensive outpatient; and the highest in outpatient). To be useful, a group of clinicians should cross rate several cases, resolve any differences, and repeat this process until they are largely consistent. Ideally this should be done in conjunction with a presentation of the diagnosis and symptoms in the rest of the GAIN so that the whole time increasingly anchors their ratings to levels of functioning.

Exhibit 5-4 Global Assessment of Functioning (GAF)

Consider psychological, social, and occupational functioning on a hypothetical continuum of mental health-illness *(including substance abuse)*. Do not include impairment in functioning due to physical (or environmental) limitations. How would you rate the individual's global functioning in the periods? (Use intermediate codes when appropriate, e.g., 45, 68, 72.)

91-100 SUPERIOR FUNCTIONING in a wide range of activities, life's problems never seem to get out of hand, is sought out by others because of his or her many positive qualities. No symptoms.

81-90 ABSENT OR MINIMAL SYMPTOMS (e.g., mild anxiety before an exam), good functioning in all areas, interested and involved in a wide range of activities, socially effective, generally satisfied with life, no more than everyday problems or concerns (e.g., an occasional argument with family members), *and in full remission (e.g., no use or problems for six or more months)*.

71-80 TRANSIENT SYMPTOMS ARE PRESENT and are expectable reactions to psychosocial stressors (e.g., difficulty concentrating after family argument); no more than slight impairment in social, occupational, or school functioning (e.g., temporarily falling behind in school work), *and almost in full remission, working a lot on relapse prevention*

61-70 SOME MILD SYMPTOMS (e.g., depressed mood and mild insomnia) or some difficulty in social, occupational, or school functioning (e.g., occasional truancy, or theft within the household), but generally functioning pretty well, has some meaningful interpersonal relationships*, the minimum requirement still met for diagnosis of abuse and/or occasional lapses*

51-60 MODERATE SYMPTOMS (e.g., flat affect and circumstantial speech, occasional panic attacks) or moderate difficulty in social, occupational, or school functioning (e.g., few friends, conflicts with co-workers)*, the minimum requirement for diagnosis of dependence and repeated lapses*.

41-50 SERIOUS SYMPTOMS (e.g., suicidal ideation, severe obsessional rituals, frequent shoplifting) or any serious impairment in social, occupational, or school functioning (e.g., no friends, unable to keep a job)*, more than the required number of diagnostic symptoms and repeated lapses*

31-40 SOME IMPAIRMENT IN REALITY TESTING OR COMMUNICATION (e.g., speech is at times illogical, obscure, or irrelevant) or major impairment in several areas, such as work or school, family relations, judgment, thinking, or mood (e.g., depressed, avoids friends, neglects family, and unable to work; *beats up others, has most or severe symptoms)*

21-30 BEHAVIOR IS CONSIDERABLY INFLUENCED by delusions or hallucinations or serious impairment in communication or judgment (e.g., sometimes incoherent, acts grossly inappropriately, suicidal preoccupation) or inability to function in almost all areas (e.g., stays in bed all day; no job, home, or friends).

11-20 SOME DANGER OF HURTING SELF OR OTHERS (e.g., suicide attempts without clear expectation of death, frequently violent, manic excitement) or occasionally fails to maintain minimal personal hygiene (e.g., smears feces) or gross impairment in communication (e.g., largely incoherent or mute).

1-10 PERSISTENT DANGER OF SEVERELY HURTING SELF OR OTHERS (e.g., recurrent violence) or persistent inability to maintain minimal personal hygiene or serious suicidal act with clear expectation of death **[BRING TO IMMEDIATE ATTENTION OF CLINICAL SUPERVISOR.]**.

0 Inadequate information

Source: DSM-IV Axis V (APA, 1994, pp. 30-32) with expansions in italics; see also Endice, H.J., Spitzer, R.L., Fleiss, J.L., et al. (1976). The Global Assessment Scale (GAS). Archives of General Psychiatry, 33, 766-771. *(NOTE: Italics added to make it more specific to substance use disorders.)*

Exhibit 5-5 Global Assessment of Relational Functioning (GARF) Scale

The GARF scale can be used to indicate an overall judgement of the functioning of a family or other on-going social relationship. In particular, it is based on the extent to which these core relationships demonstrate skills in problem solving (e.g., skills negotiating, communications, conflict resolution), organization (e.g., recognizable roles and boundaries), and emotional climate (e.g., quality of caring, empathy, mutual respect, satisfactory sexual relations). How would you rate the Individual's Global Assessment of Relational Functioning in the periods? (Use Intermediate Codes When Appropriate, e.g., 45, 68, 72.)

81-100	*SATISFACTORY* relational *social or family* unit is functioning satisfactorily from self-report of participants and from perspectives of observers.
61-80	SOME PROBLEMS functioning of relational *social or family* unit is somewhat unsatisfactory. Over a period of time, many but not all difficulties are resolved without complaints.
41-60	*MAJOR IMPAIRMENT* relational *social or family* unit has occasional times of satisfying and competent functioning together, but clearly dysfunctional, unsatisfying relationships tend to predominate.
21-40	*SERIOUS AND PERSISTENT IMPAIRMENT* relational *social or family* unit is obviously and seriously dysfunctional; forms and time periods of satisfactory relating are rare.
1-20	*DETACHMENT AND ENDANGERMENT* relational *social or family* unit has become too dysfunctional to retain continuity of contact and attachment.
0	*Inadequate information*

Source: DSM-IV Axis V (APA, 1994, pp. 758-759); *(NOTE: Italics added to make it more specific and delineate ratings more.)*

Exhibit 5-6 Social and Occupational Functioning Assessment Scale (SOFAS)

Consider social and occupational functioning on a continuum from excellent functioning to grossly impaired functioning. Include impairments in functioning due to physical limitations, as well as those due to mental impairments. To be counted, impairment must be a direct consequence of mental and physical health problems; the effects of lack of opportunity and other environmental limitations are not to be considered.

91-100	SUPERIOR FUNCTIONING in a wide range of activities.
81-90	GOOD FUNCTIONING in all areas, occupationally and socially effective.
71-80	SLIGHT IMPAIRMENT in social, occupational, or school functioning (e.g. infrequent interpersonal conflict, temporarily falling behind in schoolwork).
61-70	SOME DIFFICULTY in social, occupational, or school functioning, but generally functioning well, has some meaningful interpersonal relationships.
51-60	MODERATE DIFFICULTY in social, occupational, or school functioning (e.g., few friends, conflicts with peers or co-workers).
41-50	SERIOUS IMPAIRMENT in social, occupational, or school functioning (e.g., no friends, unable to keep a job) *in some areas.*
31-40	MAJOR IMPAIRMENT IN SEVERAL AREAS, such as work or school, family relations (e.g., depressed man avoids friends, neglects family, and is unable to work; child frequently beats up younger children, is defiant at home, and failing at school).
21-30	INABILITY TO FUNCTION *socially or occupationally* in almost all areas (e.g., stays in bed all day; no job, home, or friends).
11-20	OCCASIONAL HYGIENE PROBLEMS, fails to maintain minimal personal hygiene; unable to function independently.
1-10	PERSISTENT HYGIENE PROBLEMS, inability to maintain minimal personal hygiene. Unable to function without harming self or others or without considerable external support (e.g. nursing care and supervision).
0	Inadequate information.

Source: DSM-IV Axis V (APA, 1994, pp. 760-761) with expansions in italics; see also Goldman, H.H., Skodol, A.E., & Lave, T.R. (1992). Revising Axis X for DSM-IV: A review of measures of social functioning. American Journal of Psychiatry, 149, 1148-1156. ; *(NOTE: Italics added to make it more specific and delineate ratings more.)*

Note that for adolescents, some programs substitute the Children's General Assessment Form (CGAF; Shaffer et al., 1996) rating scale for the GAF. This scale is similar but contains more developmentally appropriate examples. If you use it, it is important check this off above the axis IV ratings (page 99 of GAIN-I).

5.4 Using the GRRS and ICP to Support Diagnoses

If the GAIN-Initial has been done directly on the computer or after it has been entered, there are two parallel clinical reports that are used to support diagnosis are the:

- **GAIN Referral and Recommendation Summary (G-RRS)** – A text based narrative in MS Word designed to be edited and shared with specialist, clinical staff from other agencies, insurers and lay people. This report can be edited to suit the staff or organization's preferences for tentative diagnoses.

- **Individual Clinical Profile (ICP)** – A more detailed report in MS Access designed to help triage problems and help the clinician go back to the GAIN for more details if necessary (generally not edited or shared). This version has more detailed information in [brackets] specifying the rule by which self-reported data was used to print a given diagnostic statement.

Both reports allow the use the client name, initials or another term supplied by the person running the report. They can also use the site's organizational name or another term supplied by the person running the report. Both reports start have a section provide an initial diagnostic summary based on the client's self report and any additional diagnoses or information that were put into the XDIAG section by the administrator. The clinician responsible for making the diagnosis will then have to eliminate duplicates, weigh in with other information, and/or decide what other information might be necessary to confirm or rule out a given diagnosis.

Note that for many studies there is a "Core" version of the GAIN that may include significantly less diagnostic information. Specifically several core versions

- only collect abuse/dependence symptoms for "any substance" (skipping the S9 grid)
- do not collect lifetime history of health problems used in axis III (skipping P10)
- do not collect personality symptoms (skipping the M4 questions)
- do not collect the criteria for pathological gambling (skipping the symptoms in V9)

If you are using the GAIN for diagnosis you may want to add these items back into to your local core or full version.