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Using the GAIN to assess for co-occurring disorders

by LaVerne Hanes-Stevens, GAIN Clinical Training and Product Developer

Among people in the community with psychiatric and substance use disorders, multiple co-occurring diagnoses are the norm. Co-occurrence of psychiatric disorders, substance use disorders, and crime and violence are prominent characteristics of those entering substance use disorder treatment, mental health services, and the criminal and juvenile justice systems. Yet while research indicates that the majority of people entering treatment for substance use disorders have at least one co-occurring psychiatric disorder, relatively few have such disorders documented as part of their intake assessments. This contributes to frustration on the part of clients and clinicians because the treatment plans that come from those assessments are not likely to address some of the clients' most salient problems. Those clients, in turn, are more likely to experience problems with treatment and medication compliance, functional status, community adjustment, and quality of life, as well as shorter lengths of stay, administrative discharges, and poorer outcomes following treatment. Conversely, early identification of mental health problems in a substance treatment program is associated with more comprehensive treatment, better outcomes, and prevention of the onset of secondary disorders.

As a biopsychosocial assessment battery for people entering substance abuse treatment, the GAIN-Initial is designed to help clinicians and researchers make diagnostic impressions about participants based on the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (Text Revision)*. There are hundreds of diagnoses (each with multiple specifiers) identified in the *DSM-IV-TR*. It would be difficult, therefore, to assess for all those diagnoses in a semistructured instrument like the GAIN-I. So, exactly what's in the GAIN and why?

Axis I non–substance-related disorders in the GAIN. In addition to addressing substance use disorders, the GAIN also addresses 12 of the most common co-occurring Axis I internalizing and externalizing disorders, as diagnostic impressions or as rule-out statements. These statements are included in the GAIN Recommendation and Referral Summary (GRRS), a narrative diagnostic report generated by the online GAIN ABS and older Legacy ABS interactive assessments. Here are all the DSM Axis I diagnoses included in the GAIN:

Mood Disorders
- 296.xx Major Depressive Disorder (MDD)
- Rule out 296.90 Mood Disorder NOS

Anxiety Disorders
- 300.02 Generalized Anxiety Disorder (GAD)
- Rule out 300.00 Anxiety Disorder NOS
- Rule out 309.81 Posttraumatic Stress Disorder, 308.30 Acute Stress Disorder, or other disorder of extreme stress

Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence
- 314.00 Attention Deficit Hyperactive Disorder – Inattentive Type
- 314.01 Attention Deficit Hyperactive Disorder – Combined Type
- 314.01 Attention Deficit Hyperactive Disorder – Predominately Hyperactive-Impulsive Type
- 312.81 Conduct Disorder, Childhood Onset
- 312.82 Conduct Disorder, Adolescent Onset
- 312.89 Conduct Disorder, Unspecified Onset

Other Axis I Disorders
- Rule out 300.81 Somatoform Disorder
- 312.31 Pathological Gambling

See CO-OCCURING DISORDERS next page

In This Issue...

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We'd love to hear from GAIN users with suggestions. All comments, suggestions, and inquiries can be sent to GAINInfo@chestnut.org or 448 Wylie Drive, Normal, IL 61761. Back issues available at http://www.chestnut.org/LI/gain/GCC_Insider/index.html.

The GAIN Coordinating Center: Improving assessment to facilitate evidence-based practices.

Online resources

Launched in November, Reclaiming Futures Every Day (http://blog.reclaimingfutures.org) is the blog of the Reclaiming Futures project. It is updated frequently with facts, links, and in-depth posts on issues related to the Reclaiming Futures project, much of which is of interest to people within the substance abuse treatment research and juvenile justice fields. Recently it featured a couple of GAIN-related articles:

In "Integrating the GAIN ABS System with an Electronic Record System like WITS" (March 18, 2009), Mike Vacca and Michael Dennis explain the details involved in incorporating GAIN ABS into existing electronic systems.

And in "Better Treatment Outcomes for Teens – Training, Monitoring, and Supervision are the Key" (March 9, 2009), Randy Muck, inspired by his meeting with a group of enthusiastic supporters, discusses the effectiveness of programs funded through the Assertive Adolescent and Family Treatment program (AAFT) on adolescent abstinence.

Both these articles and much more are available in the site's archives.

Co-Occurring disorders (continued from previous page)

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

GAIN users must also note that instead of including a posttraumatic stress disorder (PTSD) diagnosis, the GRRS will state, "*Rule out 309.81 Posttraumatic Stress Disorder, 308.30 Acute Stress Disorder, or other disorder of extreme stress.*" The GAIN will not give a definitive PTSD diagnosis because in the original conceptualization of PTSD, the diagnosis was tied to an explicit traumatic event in the past. This did not work well when clients had experienced child maltreatment, multiple sources of trauma, or both past and ongoing trauma (each of which is common for clients with substance use disorders). With that in mind, the GAIN's Traumatic Stress Scale, comprising items M2a-p, is based on the civilian version of the Mississippi PTSD measure and is not designed to distinguish between acute stress disorder, PTSD, and other disorders of extreme stress (DES or sometimes called DES–Not Otherwise Specified (NOS) or complex PTSD). This scale simply screens for the presence of diagnostic criteria without linkage to a discrete event.

Axis II disorders in the GAIN. The GAIN screens for the presence of severe personality problems but does not try to differentiate specific diagnoses. The GRRS will, however, generate one of two DSM statements related to personality disorders:

Rule out 301.7 Antisocial Personality Disorder or 301.83 Borderline Personality Disorder [Based on (3+ symptoms reported in items M3b1-15 and 1+ days reported in item M3c) or (3+ symptoms in items M4z1-3 or item M4z > 0), and (16+ symptoms in M4a-x)].

Rule out 301.9 Personality Disorder NOS [(Based on 16+ symptoms in items M4a-x) or (3+ symptoms in items M4z1-3), or (item M4z > 0)]. The GAIN's Personality Complexity Styles Scale is divided into three subscales for the three personality disorder clusters:

- The Cautious Personality Index screens for Cluster A disorders (paranoid, schizoid, and schizotypal personality disorders). These disorders characterize people who often appear odd or eccentric.
- The Impulsivity Personality Index screens for Cluster B disorders (antisocial, borderline, histrionic, and narcissistic personality disorders). These disorders characterize people who often appear dramatic, emotional, or erratic and have a hard time recognizing social cues.
- The Worrying Personality Index screens for Cluster C disorders (avoidant, dependent, and obsessive-compulsive personality disorders). These disorders characterize people who often appear anxious or fearful.

While the GAIN questions related to cutting, burning, and other forms of self-mutilation (items M4z1-4) are most prototypical of borderline personality disorder 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 Cluster B diagnosis. Besides the obvious risk of harm to self, others may quickly imitate such behaviors in schools, communities, and treatment settings. This is particularly true of adolescents.

The GRRS software is not programmed to generate explicit diagnoses for these disorders:

Bipolar (mania not measured)
Psychosis
Schizophrenia
Adjustment disorder
Reactive attachment disorders
Eating disorders (anorexia, bulimia)
Other impulse control disorders

However, a well-trained clinician may be able to use their best judgment to diagnose these disorders by looking at the participant's responses to the mental health items on the GAIN.

GCC team in the spotlight: GAIN Data Management

By Kristine Brent, GAIN Data Management Training Specialist

After being certified to administer the GAIN, the next step a grantee may take is to submit data to the GAIN Coordinating Center. Assigned to assist sites with the data process, the members of the GAIN Data Management team complete many tasks to help data managers and other grantees.

From a humble team of two in 2004, the GAIN Data Management team now consists of twelve members. Currently leading ten CSAT projects and five regional projects, the data team is as busy as ever, processing data and assisting data managers with the data process.

Corey Smith, GAIN Data Management Supervisor, and Rachel Meckley, GAIN Data Management Assistant Supervisor, lead the team every month, ensuring that all grantees receive the best service and quality analytic data.

Every month, grantees from across the United States submit data to the GAIN Data Management team. Data submissions varies from grant to grant; with five different types of assessments, one software program, one web-based program, and two Excel documents used for tracking clients and verifying assessment records, Data Management team members organize and update many types of information in order to assist data managers at different sites.

The first tasks each month are updating the GAIN Record Log with new functions and updating the master GAIN Edits files with each site's responses stating that changes to their ABS datasets have been completed.

The largest tasks of the month lie with data processing. Depending on the grant, a site may submit data from the legacy ABS software or the newer, web-based GAIN ABS program. Before a GAIN Data Management team member starts to process data, an Infrastructure is run, which automatically reads in a site's data, helping to streamline the data process. Depending on the month, a grant will undergo either a general monthly data process or a more thorough quarterly process. The difference lies in the types of checks performed: during the monthly process, approximately twenty variables are checked for inconsistencies and errors, whereas in the quarterly process, every variable in the GAIN assessment is checked.

Every quarter, Data Management Team members compile a grant's data to create a document called the Site Profiles. This Excel spreadsheet consists of a series of charts that contain site-specific data, such as client demographics, victimization, and substance abuse patterns, as well as charts that allow comparisons between sites and averages of all statistics across all sites.

Besides these required monthly tasks, every team member also has different responsibilities, including leading data manager training calls using Microsoft LiveMeeting, updating syntax files to capture additional inconsistencies and errors, and creating documentation.

The GAIN Data Management team is available to answer any questions or take comments regarding the data process via e-mail (DataSubmit@chestnut.org), and its members look forward to supporting you!

Frequently asked questions

Q: I noticed that there are five main methods of drug use on the GAIN (besides "not applicable" and "other"): oral, smoking, inhalation, intravenous, and intramuscular. I'm familiar with the first four, but how would someone take drugs intramuscularly?

A: Intramuscular (IM) injection is reported less frequently than any main route of administration: among the current CSAT grants, it was reported in only 0.6% of GAIN-I cases, as opposed to 48.7% for drinking, eating, or taking pills, 55.1% for smoking, 13.7% for inhaling, huffing, sniffing, or snorting, and 1.3% for intravenous (IV) injection (and 0.3% for other). IM injection is the injection of a substance directly into the central area of specific muscles (usually the buttocks, the thigh, or the upper arm), with the blood vessels that supply that muscle distributing the drug through the circulatory system. Given the depth and relative toughness of muscle tissue, needles used to administer IM injections tend to be larger in both gauge and length than needles used for intravenous injection. Any water-soluble drug, such as heroin, amphetamines, methamphetamine, buprenorphine, benzodiazepines, barbiturates, and cocaine, can be injected intramuscularly. Based on the anecdotal evidence of users at Erowid.org, ketamine seems by far to be the substance most commonly injected intramuscularly, followed by DPT (dipropyltryptamine), 2C-family phenethylamines, and other hallucinogens. (Anabolic steroids are also sometimes injected intramuscularly.)

There are a few reasons why users would choose the IM route: the chemical makeup of some substances requires injection into muscle as opposed to directly into the bloodstream, and the slower absorption into the circulatory system results in a high that is not usually as intense as with IV injection but which tends to last longer. There is also usually less risk of spreading disease with IM injection because blood is rarely pulled back into the plunger, unlike with IV injection. IM injection in medical settings is often used for small amounts of medicine, but because muscles can hold more fluid than veins, street users often inject more of a substance intramuscularly than they would intravenously (though IM injection often takes longer because of the slower rate of absorption than IV injection). In addition, IV users may occasionally miss a vein and hit muscle instead.

FYI: along with the five routes of administration mentioned in the GAIN, the FDA's Center for Drug Evaluation and Research recognizes over one hundred others; visit http://tinyurl.com/mtkqdn for details.

Recent GAIN publications

GAIN-related data is frequently used in articles, book chapters, and other scholarly publications in the substance abuse treatment field. Below is a past-year roundup of articles utilizing GAIN data. A periodically updated list of publications is available at http://www.chestnut.org/LI/gain/index.html.

Chan, Y.-F., Godley, M. D., Godley, S. H., & Dennis, M. L. (2009). Utilization of mental health services among adolescents in community-based substance abuse outpatient clinics. *The Journal of Behavioral Health Services & Research*, *35*(1), 35-51.

D'Amico, E. J., Edelen, M. O., Miles, J. N., & Morral, A. R. (2008). The longitudinal association between substance use and delinquency among high-risk youth. *Drug and Alcohol Dependence*, *93*(1-2), 85-92.

Dennis, M. L., Ives, M. L., White, M. K., & Muck, R. D. (2008). The Strengthening Communities for Youth (SCY) initiative: A cluster analysis of services received, their correlates and how they are associated with outcomes. *Journal of Psychoactive Drugs*, *40*(1), 3-16.

Dennis, M. L., White, M., & Ives, M. L. (2009). Individual characteristics and needs associated with substance misuse of adolescents and young adults in addiction treatment. In C. Leukefeld, T. Gullotta, M. S. Tindall (Eds.), *Handbook on adolescent substance abuse prevention and treatment: Evidence-based practice* (pp. 45-72). New London, CT: Child and Family Agency Press.

Garner, B. R., Godley, S. H., & Funk, R. R. (2008). Predictors of early therapeutic alliance among adolescents in substance abuse treatment. *Journal of Psychoactive Drugs*, *40* (1), 55-65.

Garner, B. R., Godley, S. H., Funk, R. R., Dennis, M. L., Smith, J. E., & Godley, M. D. (2009). Exposure to Adolescent Community Reinforcement Approach treatment procedures as a mediator of the relationship between adolescent substance abuse treatment retention and outcome. *Journal of Substance Abuse Treatment*, *36*(3), 252-264.

Godley, S. H., Passetti, L. L., Funk, R. R., Garner, B. R., & Godley, M. D. (2008). One-year treatment patterns and change trajectories for adolescents entering outpatient treatment for the first time. *Journal of Psychoactive Drugs*, *40*(1), 17-28.

Hall, J. A., Smith, D. C., Easton, S. D., An, H., Williams, J. K., Godley, S. H., & Jang, M. (2008). Substance abuse treatment with rural adolescents: Issues and outcomes. *Journal of Psychoactive Drugs*, *40*(1), 109-120.

Hanes-Stevens, L., & White, M. K. (2008). Effective treatment planning for substance abuse and related disorders. *Counselor*, *9*(5), 10-18.

Mason, M. (2009). Social network characteristics of urban adolescents in brief substance abuse treatment. *Journal of Child & Adolescent Substance Abuse*, *18*(1), 72-84.

Mason, M., Cheung, I., & Walker, L. (2009). Creating a geospatial database of risks and resources to explore urban adolescent substance use. *Journal of Prevention & Intervention in the Community*, *37*(1), 21-34.

Mulatu, M. S., Leonard, K. J., Godette, D. C., & Fulmore, D. (2008). Disparities in the patterns and determinants of HIV risk behaviors among adolescents entering substance abuse treatment programs. *Journal of the National Medical Association*, *100*(12), 1405-1416.

Ramchand, R., Griffin, B.A., Harris, K. M., McCaffrey, D. F., & Morral, A. R. (2008). A prospective investigation of suicide ideation, attempts, and use of mental health service among adolescents in substance abuse treatment. *Psychology of Addictive Behaviors*, *22* (4), 524-532.

Ramchand, R., MacDonald, J., Haviland, A., & Morral, A. R. (2009). A developmental approach for measuring the severity of crimes. *Journal of Quantitative Criminology*, *25*(2), 129-153.

Ramchand, R., Morral, A. R., & Becker, K. (2009). Seven-year life outcomes of adolescent offenders in Los Angeles. *American Journal of Public Health*, *99*(5), 863-870.

Riley, K. J., Rieckmann, T., & McCarty, D. (2008). Implementation of MET/CBT-5 for adolescents. *Journal of Behavioral Health Services & Research*, *35*(3), 304-314.

Ruiz, B. S., Stevens, S. J., Fuhriman, J., Bogart, J. G., & Korchmaros, J. D. (2009). A juvenile drug court model in southern Arizona: Substance abuse, delinquency, and sexual risk outcomes by gender and race/ethnicity. *Journal of Offender Rehabilitation*, *48*(5), 416-438.

Sacks, S. (2008). Brief overview of screening and assessment for co-occurring disorders. *International Journal of Mental Health and Addiction*, *6*(1), 7-19.

Sacks, S., Melnick, G., & Grella, C. E. (2008). Synthesis of studies of co-occurring disorder(s) in criminal justice and a research agenda. *Behavioral Sciences & the Law*, *26* (4), 475-486.

Smith, D. C., & Hall, J. A. (2008). Strengths-oriented family therapy for adolescents with substance abuse problems. *Social Work*, *53* (2), 185-188.

Smith, D. C., Hall, J. A., Jang, M., & Arndt, S. (2009). Therapist adherence to a motivational-interviewing intervention improves treatment entry for substance-misusing adolescents with low problem perception. *Journal of Studies on Alcohol and Drugs*, *70*(1), 101-105.

Titus, J. C., & White, W. L. (2008). Substance use among deaf and hard of hearing youths: A primer for student assistance professionals. *Student Assistance Journal*, *20*(3), 14-18.

Williams, J. K., Smith, D. C., Gotman, N., Sabri, B., An, H., & Hall, J. A. (2008). Traumatized youth and substance abuse treatment outcomes: A longitudinal study. *Journal of Traumatic Stress*, *21*(1), 100-108.