GAIN-SS

Global Appraisal of Individual Needs – Short Screener (GAIN-SS): Administration and Scoring Manual Version 3

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TABLE OF CONTENTS

Acknowledgments ..... **iii**

Table of Contents ..... **v**

1. Overview of the GAIN-SS **1**
1.1 Introduction 1
1.2 GAIN-SS Reports 2

2. Semistructured Interviewing Basics **3**

3. Preparations **5**
3.1 Setting up for the interview 5
3.2 Optional use of the GAIN's Cognitive Impairment Screener 6
3.3 Introducing the GAIN-SS to the client 8
3.4 Developing optional personalized anchors 9

4. Instructions for GAIN-SS Administration **10**
4.1 The interviewing process 11
4.2 Field review and conclusion of the interview 12
4.3 Completing the staff use box 13

5. Scoring the GAIN-SS **13**

6. Interpretation **16**
6.1 Interpretation at the individual level 16
6.2 Interpretation as a measure of change 18
6.3 Interpretation for quality assurance and program planning 19
6.4 Evaluation of penetration and referral rates 19

References **21**

Appendix: Psychometric Analyses of the GAIN-SS Screeners **23**

GAIN Short Screener (GAIN-SS) 3.0 ..... **31**

GAIN Short Screener 3.0 Interviewer Instruction Sheet **33**

GAIN Short Screener 3.0 Self-Administration Instruction Sheet **35**

GAIN Short Screener (GAIN-SS)
Administration and Scoring Manual

1. OVERVIEW OF THE GAIN-SS

1.1 Introduction

The GAIN Short Screener (GAIN-SS) is a brief 5 to 10-minute instrument designed to quickly and accurately screen general populations of both adults and adolescents for possible internalizing or externalizing psychiatric disorders, substance use disorders, or crime and violence problems. A result of moderate to high problem severity in any single area or overall suggests the need for further assessment (for example, with the comprehensive, 2-hour GAIN Initial biopsychosocial instrument) or referral to some part of the behavioral health treatment system. This progressive approach enables agencies to direct time and resources to where they are needed most.

The GAIN-SS comprises four subscreeners (five to seven items each): the Internalizing Disorder Screener (IDScr), the Externalizing Disorder Screener (EDScr), the Substance Disorder Screener (SDScr), and the Crime and Violence Screener (CVScr). The four subscreeners combined form the 23-item Total Disorder Screener (TDScr).

The screening items measure problem recency (the most recent or last time the participant experienced a particular problem) and can be calculated for past month, past 90 day, past 12 month, and lifetime behaviors. For example, item 1a asks, "When was the last time that you had significant problems with feeling very trapped, lonely, sad, blue, depressed, or hopeless about the future?" Participants answer by choosing the response that corresponds to the last time they experienced that problem: past month, 2 to 3 months ago, 4 to 12 months ago, 1 or more years ago, or never. (Versions of the GAIN-SS before the 3.0 had only four time frames.) All the screeners are scored to indicate low, moderate, or high-severity problems depending on the number and recency of reported behaviors.

In general, the past-month and past-90-day symptom counts are used as measures of change (when the GAIN-SS is administered at intervals or as its own follow-up, such as in schools or employee assistance programs); the past-year count is used to screen for current disorders; and the lifetime measure is used as a covariate and to measure remission. The latter is done by identifying people with a lifetime problem who are in early remission (lifetime problems but no past-month problems) or sustained remission (lifetime problems but no past-year problems).

The GAIN-SS is designed for staff or self-administration in diverse settings, including employee assistance programs, student assistance programs, health clinics, juvenile and criminal justice programs, child welfare programs, and mental health and substance abuse treatment programs. The GAIN-SS requires minimal training or direct supervision to administer. It can be administered with pen and a paper copy or online, either with GAIN ABS, the GAIN's online administration and reporting system, or with a simplified version

called GAIN-SS Web. Interviewers can administer the screener in person or via telephone, with an online voice-communication program such as Skype, or with the help of an interpreter for deaf and hard-of-hearing participants. It can be easily incorporated into existing instrument batteries or systems. Versions in Spanish and other languages are also available. The GAIN-SS has been used with adolescents as young as 12; however, younger adolescent clients are likely to need more concepts explained to them, and the interview may take longer than average.

Information from the GAIN-SS can be used as a common metric across systems or staff (e.g., employee assistance program with multiple contractors). It can also be used as a denominator for quality assurance on the extent to which the rate of diagnoses or referrals are consistent with the estimated mix of problems (discussed further in Section 6). Such measures of quality assurance can be used for one-on-one supervision or performance-based contracting.

The GAIN-SS is one of the main instruments in the GAIN family of instruments, which includes the GAIN Initial (GAIN-I), a comprehensive biopsychosocial assessment, and the GAIN-Q3, a multipurpose screening and brief-intervention assessment. The GAIN Monitoring 90 Days (GAIN-M90) is a comprehensive follow-up assessment used with the GAIN-I.

The full GAIN-SS 3.0 is reproduced on p. 31. Copies of the instruments, norms from clinical samples, administration handouts, and other information is available at http://gaincc.org/gainss. For information on the psychometrics of the GAIN Short Screener, see the appendix on p. 23.

1.2 GAIN-SS Reports

Once the participant's responses are entered in GAIN ABS or GAIN-SS Web, the system processes the information and generates reports to aid in screening and referrals.

The GAIN Short Screener Full Report provides a narrative of the participant's reported problems. It gives the participant's score and level of severity in the Total Disorder Screener and each subscreener, a narrative summary that explains the significance of the scores, recommendations for next steps, and a profile of the participant's reported problems (similar to the scoring table on the back of the paper copy). The Full Report runs about three pages.

The GAIN Short Screener Summary Report is a simplified, one-page version of the Full Report with only the narrative summary and the profile table. This report is used primarily by staff in the legal system who need a comprehensive yet very brief summary of a client's current mental health, substance use, and crime and violence status.

Neither of the reports can be edited, though any notes that the interviewer or other staff member wants to add can be recorded in item 15 (referral comments).

GAIN ABS and GAIN-SS Web can also print the participant's responses with either the full text of every item or shortened text.

Figure 1. GAIN Short Screener Full Report (excerpt)

Summary

During the past year Kayla was in the moderate severity range on internalizing disorders; the low severity range on externalizing disorders; the low severity range for substance use disorders; and the low severity range on the crime/violence sub-screeners. Given Kayla's self-reported information, the following is recommended:

- referral for evaluation by a mental health service provider
- "Seems depressed but could be situational - she feels stuck without a job and has few skills. She used to drink with a student at the Deaf school but has not drank since then - "alcohol is expensive"."

Profile

The table shows Kayla's scores for each of the four sub-screeners and for the total screener. Note that each timeframe is calculated separately. The past month, past 90 days, past year, and lifetime symptom counts are determined by adding the number of 4s for past month problems, the number of 4s and 3s for past 90 day problems, the number of 4s, 3s and 2s for past year problems, and the number of 1s, 2s, 3s and 4s for problems that have occurred anytime over the life span.

Scoring					
Screener	Items	Past month (4)	Past 90 days (4, 3)	Past year (4, 3, 2)	Ever (4, 3, 2, 1)
Internalizing Disorder Screener (IDScr)	1a-1f	2	2	2	3
Externalizing Disorder Screener (EDScr)	2a-2g	0	0	0	2
Substance Disorder Screener (SDScr)	3a-3e	0	0	0	2
Crime/Violence Disorder Screener (CVScr)	4a-4e	0	0	0	1
Total Disorder Screener (TDScr)	1a-4e	2	2	2	8

Disclaimer

The GAIN-Short Screener is designed to serve as a screener in general populations to quickly and accurately identify individuals whom the full 1.5 to 2-hour GAIN-Initial would identify as

2. SEMISTRUCTURED INTERVIEWING BASICS

The GAIN-SS is designed to collect reliable, valid information during interviews. This ensures that accurate information is collected for use in the screening process. In this context, reliable and valid information have specific meanings:

- Reliability is consistency across measurement: The participant would give the same response to the question regardless of who asks it.
- Validity is the extent to which something is factually true. A valid response is an accurate response, given in the appropriate format.

Traditionally, different types of assessments were better at achieving either reliability or validity but not both. A highly structured assessment, such as a standardized test, delivers good reliability because of its scripted format: Every participant is asked the same question the same way every time. On the other hand, a less-structured assessment, such as a

clinical interview, delivers good validity because the interview can ask clarifying follow-up questions to hone in on the most accurate response.

However, each approach has limitations as well. Highly reliable assessments come at the expense of validity: A participant may misunderstand an item on a standardized test, and there may be no means for clarifying if the participant has a question or gives a response that doesn't make sense. Likewise, an assessment with good validity may lack reliability because of the deviation in administration from one interviewer to the next, or even because the same questions were not asked from interview to interview.

Because both reliability and validity are important, the substance abuse treatment field has come to value flexible assessments. The GAIN-SS is a medium-structured assessment, also known as a *semistructured* assessment. This approach offers the best of both worlds: It is structured to allow the interviewer to collect concrete information, but it also allows the flexibility to explain and clarify items and collect verbatim responses from the participant.

Mastering the basic skills required for semistructured interviewing is relatively simple. The following are guidelines for conducting a GAIN-SS interview, adapted from Dennis and colleagues (1995) and from the 10 + 1 guidelines used with other GAIN instruments (Dennis, White, Titus, & Unsicker, 2005).

- **Ask items exactly as worded.** Changing any wording can alter the meaning of the item and cause the participant to respond differently.
- **Ask every item.** If you forget to administer an item, it's important to go back and administer it, even if it's out of order.
- **Read each item completely.** Reading each item completely ensures that the participant gives the most accurate response.
- **Read the items at an appropriate tempo.** The interviewer may be extremely familiar with the assessment, but in most interviews it's the participant's first time hearing the questions. Be sure not to read the items too quickly or too slowly. Use a pace appropriate to the participant's needs.
- **Repeat misunderstood items.** If a participant does not understand an item, be sure to repeat it, and offer additional explanation to help the participant give the most accurate response.
- **When needed, use neutral probes.** If a participant provides a vague or inconsistent response, the interviewer should use neutral probes (without suggesting an answer) to help shape the responses into ones that can be coded. Some ways to do this:
  - Repeat the response choices: "How would you answer using the response choices on this card? Past month, 2 to 3 months ago, 4 to 12 months ago, 1 or more years ago, or never?"
  - Pause: Wait for a few seconds and see whether the participant elaborates.

  Probe only as necessary to obtain a clear response that meets the item specifications.

- **Do not suggest answers.** Remember that the responses need to come from the participant, not the interviewer. For the duration of the assessment, the interviewer needs to

wear the "data gatherer" hat. This requires being unbiased and suppressing value judgments or the natural instinct to help (aside from the semistructured clarifying guidelines outlined here). Keep in mind that many participants are anxious to please interviewers and will, on a conscious or unconscious level, try to shape their answers if they feel that the interviewer does not approve of a behavior. Remain an unbiased recorder of the information that the participant offers.

- **The "+1" guideline.** The most important guideline is to use common sense:
  - Get to know the GAIN
  - Be aware of participant inattentiveness
  - Be humane
  - Avoid being confrontational
  - Be culturally sensitive

3. PREPARATIONS

3.1 Setting up for the interview

- Find a quiet, private space free of distractions and interruptions. If available, use a sound masker or white-noise machine to help ensure privacy (music or sound from a television can also work, though both can be distracting).
- If using the paper version of the instrument, make sure that the person documenting (either the client or interviewer) uses pen, not pencil. Do not use pencils or erasable-ink pens. Standard pens are considered secure for documentation purposes, while pencils and erasable-ink pens are not. Black or blue ink is preferable, though other colors are acceptable if site protocol allows. Felt-tip pens are often permitted in controlled environments where ballpoint and other hard-tip pens are not.
- For online administration, have available a laptop or desktop computer with internet connectivity and a fully charged battery or access to a power source. Even if the interview will be conducted with a computer, we strongly recommend keeping paper copies of the GAIN-SS on hand in case of technical problems: If a computer fails during a screening, the interviewer can continue with a paper copy.
- Print out copies of the instruction sheet (available at http://gaincc.org/gainss and reproduced on p. 33), and if anchoring the time frames, the most recent 2-year calendar (available from http://gaincc.org/_data/files/Posting_Publications/GAIN_Calendar.pdf). Anchors help orient the participant during the interview and are recommended in many cases; see p. 9 for more information.
- If planning to have clients self-administer the GAIN-SS, first ask whether they would like to complete it themselves or whether they would like you to read the items to them and have them circle the responses themselves. Clients with reading difficulties will generally take advantage of the offer or might want only certain items read. Also be sure to have a proctor or other staff member available to answer questions and, if administering the GAIN-SS to a number of people simultaneously, ensure that clients in a group focus on their own answers. If the participant is able to self-administer the

interview, print copies of the self-administration instruction sheet (available at http://gaincc.org/gainss and reproduced on p. 35).
- Set up procedures to check clients' self-completed GAIN-SS forms for missing or unclear data (p. 12).
- If using the paper copy, review procedures for hand scoring (Section 5 on p. 13).

Before implementing use of the GAIN-SS, your agency should determine any specific referral codes, which are used for item 14 in the staff-use-only section. These codes are used to identify local treatment programs or programs within facilities. If your agency does not use these codes, leave this item blank.

3.2 Optional use of the GAIN's Cognitive Impairment Screener

Sometimes you may suspect that a participant is experiencing some degree of cognitive impairment. Such impairment may be the result of current intoxication or temporary or permanent mental problems. You may know that the participant is impaired before you start the interview, or it may become apparent as you proceed. If the participant is too distraught, distracted, intoxicated, or otherwise impaired, it may make more sense to postpone the interview, since they must be able to place themselves in space and time in order for their responses to be valid.

Prior to administering the GAIN-SS, it is important to verify that the participant possesses the necessary cognitive and literacy skills to complete the screener, and doing so is required by the Joint Commission (2012). Unfortunately, impairment is often a matter of degree, and it is not always clear when someone is too impaired to go through the interview process. For these situations, interviewers have the option of using the GAIN's Cognitive Impairment Screener (Dennis, White, Titus, & Unsicker, 2005), shown in Figure 2 and included on the interviewer instruction sheet (p. 33). This check is a modified version of the 10-item Short Blessed Scale of Cognitive Impairment (Katzman, Brown, Fuld, Peck, Schechter, & Schimmel, 1983), which has been used extensively in research on substance abuse, homelessness, head injury, Alzheimer's, and other forms of cognitive impairment. Administration time varies but usually takes no more than a minute or two. (Note: The score for the Cognitive Impairment Screener is not included in the Total Disorder Screener.)

To administer the check, ask each question and then circle the code for the number of errors. Note that each error does not equal one point: For example, missing one number when counting backwards equals 2 points, while missing the month or the time equals 3 points and missing the year equals 4 points.

As the number of errors go up, it will likely be increasingly difficult to get reliable and valid answers from the client. In general, about 5% of a substance abuse treatment population will score 10 or higher, at which point you should consider other options. If the client's main problem is intoxication, distress, or another issue that appears to be transitory, it is probably better to reschedule the interview, if possible. If you decide to proceed with the interview in spite of a high score, you should do the following:

- Administer the GAIN-SS to the participant (rather than opt for self-administration)
- Assume that the interview will be more difficult or take longer
- Be careful to avoid overinterpreting the responses
- Note the client's problems when reporting the results

Figure 2. GAIN Cognitive Impairment Screener

Because we are going to ask you a lot of questions about when and how often things have happened, I need to start by getting a sense of how well your memory is working right now.

ERROR SCORES

a. What year is it now?
(Select 4 for any error) 0 4

b. What month is it now?
(Select 3 for any error) 0 3

Please repeat this phrase after me: John Brown, 42 Mark Street, Detroit.
(No score - used for f below)

c. About what time is it?
(Select 3 for any error) 0 3

d. Please count backwards from 20 to 1.
[20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1]
(Select 2 for one error, 4 for two or more errors) 0 2 4

e. Please say the days of the week in reverse order.
[Sat, Fri, Thurs, Wed, Tues, Mon, Sun]
(Select 2 for one error, 4 for two or more errors) 0 2 4

f. Please repeat the phrase I asked you to repeat before.
[John/ Brown/ 42/ Mark Street/ Detroit]
(Select 2 for each subsection of /text/ missed)..... 0 2 4 6 8 10

g. (Add up scores from a through f and record):..... |__|__|

(If total is greater than 10, the participant is experiencing some degree of cognitive impairment. You can attempt again later if intoxication is suspected, or proceed and take into account when making the interpretation.)

In general, if a person cannot remember any of the recall test (the John Brown phrase, item e), the interview will be problematic, and alternative means of screening should be considered (such as relying on collateral reports or a psychiatric referral). You will need to consult with your supervisor to determine whether to reschedule, assess in another

way, or proceed with the understanding that the GAIN-SS's Full and Summary Reports may be inaccurate.

During follow-up or a subsequent admission, it is not uncommon for some higher-functioning people to recall the entire check, including the John Brown phrase, from memory. Usually this can be interpreted as a sign that there are few (if any) recall problems.

3.3 Introducing the GAIN-SS to the client

Research suggests that the validity of clients' responses is improved if they understand the interview process and know how their information will be used (Boruch, Dennis, & Cecil, 1996). Therefore, it is important to cover this material when introducing the GAIN-SS to the client. The most common client concerns that should be addressed in the introduction include:

- The purpose of the questions.
- Whether the questions are asked of every client, or the basis for which the client is being asked the questions now.
- How private and confidential the responses are (particularly in criminal justice or employment settings).
- How the client's reported information will be used.
- How long the screening will take.

Below is a standard introduction. In most cases you should read it as written, since paraphrasing can lead to mistakes and often ends up taking more time than simply reading the introduction as written. If the context of the interview is routinely different from this introduction (for instance, agency regulations require explicit mention of HIPAA or other confidentiality laws), consider writing an alternative to be used consistently in your situation or tailored to specific interviewing situations. This introduction also appears on the interviewing instruction sheet (p. 33).

> To help us get a better understanding of any problems you might have, how those problems are related to each other, and what kind of services might help you the most, I would like to spend about 5 to 10 minutes asking you some questions as part of a short screener that we use with many of our clients. Your answers are private and will be used only for your treatment and to help us evaluate our own services.
>
> Please answer each question as accurately as you can. If you are not sure about an answer, please give us your best guess. If you simply do not know the answer to a question, you can tell me and I'll enter "DK" for that item. You may also refuse to answer any question, and I'll enter "RF" for that item. Please ask if you do not understand a question or a word. At the end of the interview, I will check to make sure that everything is complete, and I'll answer any additional questions.
>
> Do you have any questions before we begin?

3.4 Developing optional personalized anchors

Research suggests that the biggest impediment to reliability in a self-reported assessment is confusion about the time period covered by the questions (Cottler, Robins, & Hezler, 1989; Gaskell, Wright, & O'Muircheartaigh, 2000; Sudman & Bradburn, 1973). The classic solutions to this problem are to clearly explain the time periods when asking questions and to establish "anchors," or events in the participant's life that took place on or very close to the starting point of those time periods. Anchors help keep the time frames concrete for the participant and aid in accurate recollection of when different events took place.

Sites or interviewers who wish to anchor any of the time frames used during the interview can follow the instructions below. There are three main anchoring possibilities:

- **30-day** (the point between the past-month and past-2-to-3-month time frames)
- **90-day** (the point between the past-2-to-3-month and past-4-to-12-month time frames)
- **12-month** (the point between the past-4-to-12-month and more-than-12-month time frames)

Establishing an anchor usually takes only a couple of minutes. To begin, take a two-year calendar (available from http://gaincc.org/_data/files/Posting_Publications/GAIN_Calendar.pdf), circle the current date, and then circle the target date for the time periods you wish to anchor: 30 days is approximately the same date one month earlier; 90 days is approximately 13 weeks from the current date; and 12 months is the same date one year earlier.

Then ask the participant, "Do you recall anything that was going on about [state the target date]?" If the participant has trouble remembering anything on or within a few days of that date, offer suggestions such as, "Do you remember any birthdays, holidays, or other big events that happened around that date? Did anything change with where you were living, who you were with, or at treatment, work, school, or jail?"

After the participant comes up with an anchor, enter it in the verbatim field, then read the instruction, "When we talk about things happening to you during the past 30 days [or 90 days or 12 months], we are talking about things that have happened since about [repeat the anchor]." This statement is important because it explains the purpose of the anchors to the participant.

The interviewer or other staff member should read the script below and follow the instructions in parentheses. This script is for anchoring the 30-day anchor, but it can be modified for the 90-day and 12-month anchors.

> Several questions will ask you about things that may have happened during the past month, 2 to 3 months ago, 4 to 12 months ago, or more than 12 months ago. To help you remember these time periods, please look at this calendar. First, we

will establish a 30-day anchor date. Do you recall anything that was happening on [30-day target date]?

(Probe for specific event. IF CLIENT IS UNABLE TO RECALL: Do you remember any birthdays, holidays, sporting or other special events that happened around [target date]? Did anything change in terms of where you were living, who you were with, whether you were in treatment, work, school or jail? Where were you living then? Were you in treatment, working, in school, or involved with the law then?)

30-day anchor: v. _____

If the last time something happened was between [30-day anchor] and now, please answer, "past month."

If multiple anchors are established, revise the final sentence in the script to refer to the periods of time between the anchors. For instance, if you establish 30-day and 90-day anchors, read "If the last time something happened was between [90-day anchor] and [30-day anchor], please answer, '2 to 3 months ago.'" If you establish 90-day and 12-month anchors, read "If the last time something happened was between [90-day anchor] and [12-month anchor], please answer, '4 to 12 months ago.'"

Please note: The participant's anchors are considered confidential information if they reveal potentially identifying information, and they are protected under HIPAA guidelines. If a hard copy containing the participant's anchors must leave a site for some reason (such as when a participant is referred to another agency), the anchors should be removed with a black permanent marker.

4. INSTRUCTIONS FOR GAIN-SS ADMINISTRATION

On the next pages are simple instructions on how to administer the GAIN-SS. The interviewer should be familiar with these instructions before interviewing a client.

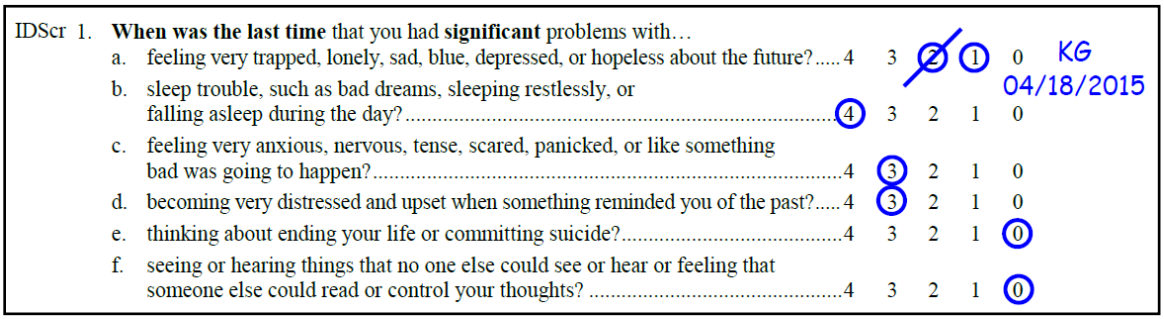
Many agencies allow clients to self-administer the GAIN-SS. If this is an option, a staff member should complete the header information, administer the Cognitive Impairment Screener (which should be completed before any self-administration), and establish the anchors (if using). The staff member can either read the introduction as part of site protocol, or the participant can read it themselves. At that point the participant can continue the instrument on their own. The self-administration sheet (available at http://gaincc.org/gainss and reproduced on p. 35) includes instructions, a sample introduction, and an anchoring worksheet. This sheet should be given to the participant to use as a reference.

4.1 The interviewing process

At the start of the interview:

- Make sure there are paper copies available of all needed materials: the GAIN-SS screener, the instruction sheets, the calendar, and any other required materials. It's a good idea to print multiple copies of all materials ahead of time, especially at agencies that do a large number of interviews or when screening a large number of clients.
- Start at the top of the first page and enter the client's first name, middle initial, and last name in the designated fields.
- Enter the date in the space below the client's name. Be sure to use only numbers and the mm/dd/yyyy format. For instance, if the date is January 1st, 2015, enter "01/01/2015."
- If administering the Cognitive Impairment Screener, do so now, before administering any of the items.
- Make note of the time either on the paper copy of the GAIN-SS, a separate piece of paper, or in the notes field on the online version. The start time will be used to figure the number of minutes spent on the interview.
- Read the introduction.
- Read the first item, document the participant's response, and continue through the items in order. Read each item carefully to avoid any misunderstanding.
- Don't forget to read the stem at the beginning of each section (e.g., "When was the last time…"). You should also repeat the stem before an item if you get interrupted and have to repeat or restart a question.
- Record only one response. Make sure that the responses are marked clearly, including any verbatim responses or notes.
- If you have to make any corrections, cross out the original response and write the new response neatly, then initial and date the change.

Figure 3. Documenting changes



IDScr 1. **When was the last time** that you had **significant** problems with…					
a. feeling very trapped, lonely, sad, blue, depressed, or hopeless about the future?	4	3	~~2~~	1	0 KG 04/18/2015
b. sleep trouble, such as bad dreams, sleeping restlessly, or falling asleep during the day?	4	3	2	1	0
c. feeling very anxious, nervous, tense, scared, panicked, or like something bad was going to happen?	4	3	2	1	0
d. becoming very distressed and upset when something reminded you of the past?	4	3	2	1	0
e. thinking about ending your life or committing suicide?	4	3	2	1	0
f. seeing or hearing things that no one else could see or hear or feeling that someone else could read or control your thoughts?	4	3	2	1	0

- If the client can't choose between responses, ask them to choose the response that comes closest to how they feel. If they still can't choose responses, mark DK. If the participant does not want to answer a question even after reminding them of their confidentiality, mark RF. Any unanswered items will not be considered in the scoring.

Figure 4. Documenting DK and RF

EDScr 2.	**When was the last time** that you did the following things **two or more times**?						
	a. Lied or conned to get things you wanted or to avoid having to do something	4	3	2	1	0	DK
	b. Had a hard time paying attention at school, work, or home.	4	3	2	1	0	
	c. Had a hard time listening to instructions at school, work, or home.	4	3	2	1	0	
	d. Had a hard time waiting for your turn.	4	3	2	1	0	
	e. Were a bully or threatened other people	4	3	2	1	0	RF
	f. Started physical fights with other people	4	3	2	1	0	
	g. Tried to win back your gambling losses by going back another day.	4	3	2	1	0	

- For item 5 (Do you have other significant psychological, behavioral, or personal problems that you want treatment for or help with?) it may help the client to define what we mean by "significant." Problems are considered significant when clients have them for two or more weeks, when the problems keep coming back, when they keep clients from meeting their responsibilities, or when they make clients feel like they can't go on. You can write "none" if applicable. On the paper version you can use the margin or another sheet if you need more space.
- For item 6 fill in the client's gender: 1 for male, 2 for female, 99 for other. If other, use the verbatim line below the item to specify how the client identifies themselves (e.g., transgender male to female).
- For item 7 fill in the client's age as of the date of the interview.
- For item 7a (How many minutes did it take you to complete this survey?), note the time, then subtract the start time from the end time to get the total number of minutes. For example, if the interview started at 2:31 p.m. and ended at 2:37 p.m., the time to complete is 6 minutes.

4.2 Field review and conclusion of the interview

At the end of the interview and before the client leaves the interview setting, review the client's responses to ensure that all required items have been completed. The review should also confirm that all responses were entered neatly and legibly. This review is especially important if the participant self-administered the screener because it ensures accurate information, which results in more accurate clinical reports and more accurate data for analysis.

The review can take several minutes, depending on the circumstances of the interview, so this can be a good opportunity for the participant to take a break (be sure to let them know that they may have to answer a small number of additional questions to help clarify any missing or unclear responses). Scan the pages to make sure that no required items were skipped and that all responses are legible. Flag any questionable responses to resolve them with the participant when they return from their break. Once you have completed the field review, thank the participant and let them know their next steps.

4.3 Completing the staff use box

Figure 5 shows the staff-use-only items. For items 8, 9, and 10, record the site ID, staff ID, and client ID numbers and names according to project or agency-specific protocol. Unless permitted at your site, it is best to use only a client ID and not a client name to help avoid accidental disclosure or breach of privacy. For item 11 record the mode of administration (on the paper version, circle the appropriate number) as either administered by project or agency staff, administered by someone else (e.g., another adult or staff from another agency), or self-administered.

For item 13, check whether the client is being referred to mental health (MH), substance abuse (SA), anger management (ANG), or other services. Check all that apply, or leave all blank if the client is not being referred to services.

Figure 5. Staff use box

Staff Use Only	
8. Site ID: _____	Site name v. _____
9. Staff ID: _____	Staff name v. _____
10. Client ID: _____	Comment v. _____
11. Mode: 1 - Administered by staff 2 - Administered by other 3 - Self-administered	
13. Referral: MH ____ SA ____ ANG ____ Other ____	14. Referral codes: _____
15. Referral comments: v1. _____	

For item 14 record the primary program code of the facility to which the client is being referred, using project or agency-specific codes. These codes should be determined ahead of time by each local agency according to whatever organizing criteria they choose.

For item 15 please add any additional comments or recommendations that you want to appear in the Full and Summary Reports.

5. SCORING THE GAIN-SS

GAIN ABS and GAIN-SS Web score the client's past-month, past-90-day, past-year, and lifetime symptom counts automatically. Users who want to quickly total the client's responses on paper can use the table at the bottom of the GAIN Short Screener's second page, following the instructions below.

Domain scores from each of the four subscreeners are totaled separately, while the Total Disorder Screener is the total sum of the domain scores:

- The Internalizing Disorder Screener (IDScr) comprises items 1a–f
- The Externalizing Disorder Screener (EDScr) comprises items 2a–g
- The Substance Disorder Screener (SDScr) comprises items 3a–e

- The Crime/Violence Screener (CVScr) comprises items 4a–e
- The Total Disorder Screener (TDScr) comprises items 1a to 4e, or the sum of all GAIN-SS items

The GAIN-SS is scored by counting the number of participant responses for each time frame, not by summing the response values (i.e., the numbers that appear in the time-frame columns). For example, suppose that a client gave these responses in the Internalizing Disorders Screener (items 1a–f):

Figure 6. Completed Internalizing Disorders Screener (paper version)

The following questions are about common psychological, behavioral, and personal problems. These problems are considered **significant** when you have them for two or more weeks, when they keep coming back, when they keep you from meeting your responsibilities, or when they make you feel like you can't go on. After each of the following questions, please tell us the last time, if ever, you had the problem by answering whether it was in the past month, 2 to 3 months ago, 4 to 12 months ago, 1 or more years ago, or never.	Past month	2 to 3 months ago	4 to 12 months ago	1+ years ago	Never
	4	3	2	1	0
IDScr 1. **When was the last time** that you had **significant** problems with…					
a. feeling very trapped, lonely, sad, blue, depressed, or hopeless about the future?	4	3	2	(1)	0
b. sleep trouble, such as bad dreams, sleeping restlessly, or falling asleep during the day?	(4)	3	2	1	0
c. feeling very anxious, nervous, tense, scared, panicked, or like something bad was going to happen?	4	(3)	2	1	0
d. becoming very distressed and upset when something reminded you of the past?	4	(3)	2	1	0
e. thinking about ending your life or committing suicide?	4	3	2	1	(0)
f. seeing or hearing things that no one else could see or hear or feeling that someone else could read or control your thoughts?	4	3	2	1	(0)

The "Items" column in the scoring table shows which items to score for that screener, and the responses to be counted for each time frame appear in parentheses in the four time-frame columns. Thus, to score the Internalizing Disorders Screener, start with items 1a–f on the GAIN-SS and count the number of past-month responses, or the number of 4s. In this case, the participant reported only one past-month problem (in item 1b), so enter 1 (*not* 4, which is simply the response value) in the corresponding column in the IDScr row:

Screener	Items	Past month (4)	Past 90 days (4, 3)	Past year (4, 3, 2)	Ever (4, 3, 2, 1)
IDScr	1a – 1f	1			

Next, for the "Past 90 days" column in the scoring table, count the number of 4s and 3s reported in items 1a–1f. The participant had two "2 to 3 months ago" responses (items 1c and 1d) in addition to the one past-month response, so enter 3 in the "Past 90 days" column:

Screener	Items	Past month (4)	Past 90 days (4, 3)	Past year (4, 3, 2)	Ever (4, 3, 2, 1)
IDScr	1a – 1f	1	3		

Follow the same pattern for the "Past 12 months" and "Ever" time frames in the scoring table. Remember that the numbers in parentheses in the top of each column denote which response codes should be counted from the GAIN-SS. In this example, for items 1a–1f the participant reported no problems in the 4-to-12-month range, so the total number of "Past 12 months" problems on the scoring sheet is still 3 (because the participant's three past-90-day problems carry over into the past-year count). The participant reported one problem last occurring more than 12 months ago (item 1a), so that problem is added to the running total, for a total of four problems occurring within the participant's lifetime (the "Ever" column on the scoring sheet). "Never" responses are not counted in the scoring table.

Thus, the participant's completed Internalizing Disorders Screener score looks like this:

Screener	Items	Past month (4)	Past 90 days (4, 3)	Past year (4, 3, 2)	Ever (4, 3, 2, 1)
IDScr	1a – 1f	1	3	3	4

This process is repeated for each screener in the scoring table. Any DK or RF response or accidentally skipped item should be excluded from the scoring.

The bottom row, the Total Disorder Screener (TDScr), is scored by totaling the numbers reported in all the preceding rows. If the participant continued with the rest of the GAIN-SS and reported problems in several life areas, their completed GAIN-SS screening table would look similar to this:

Screener	Items	Past month (4)	Past 90 days (4, 3)	Past year (4, 3, 2)	Ever (4, 3, 2, 1)
IDScr	1a – 1f	1	3	3	4
EDScr	2a – 2g	0	1	1	1
SDScr	3a – 3e	2	2	3	3
CVScr	4a – 4e	0	0	0	1
TDScr	1a – 4e	3	6	7	9

6. INTERPRETATION

6.1 Interpretation at the individual level

To screen for possible diagnoses, we recommend that the domain and total scores from the completed GAIN-SS be triaged into three groups based on the number of reported past-year symptoms:

- **Low** (0 past-year symptoms): Unlikely to have a diagnosis or need services.
- **Moderate** (1 to 2 past-year symptoms): A possible diagnosis and possibly in need of services; the client is likely to benefit from a brief assessment and brief intervention.
- **High** (3+ past-year symptoms): High probabilities of a diagnosis and need for services; the client is likely to need more formal assessment and intervention, either directly or through referral.

These triage groups are applicable to both the individual domain scores and the Total Disorder Screener score. In other words, a participant may not score in the high range on any individual subscreener, but they may report a total of three past-year symptoms across two or more subscreeners.

In general it can be assumed that over half the participants who receive a moderate score (1 or 2) and virtually all of those with a high score (3 to 23) on the Total Disorder Screener will have a diagnosis when administered the full GAIN. Figure 7 and Figure 8 show the distribution of TDScr scores by age within level of care for people who entered clinical programs. For adolescents, 78% of the outpatients and 94% of the residential clients scored in the high range (medians of 6 and 11 respectively). For adults, 76% of the outpatient and 88% of the residential clients scored in the high range (medians of 6 and 8 respectively). While there is considerable overlap between problem severity in clients entering outpatient and residential treatment, residential clients' problem severity is greater for both adolescents (Cohen's $d = 0.53$) and adults (Cohen's $d = 0.34$). It should be noted that a subset of people who come from controlled environments, are mandated to treatment by the courts, or are admitted for other reasons will score 0 on the TDScr but will still be admitted to clinical programs.

Figure 7. Total Disorder Screener distribution for adolescents

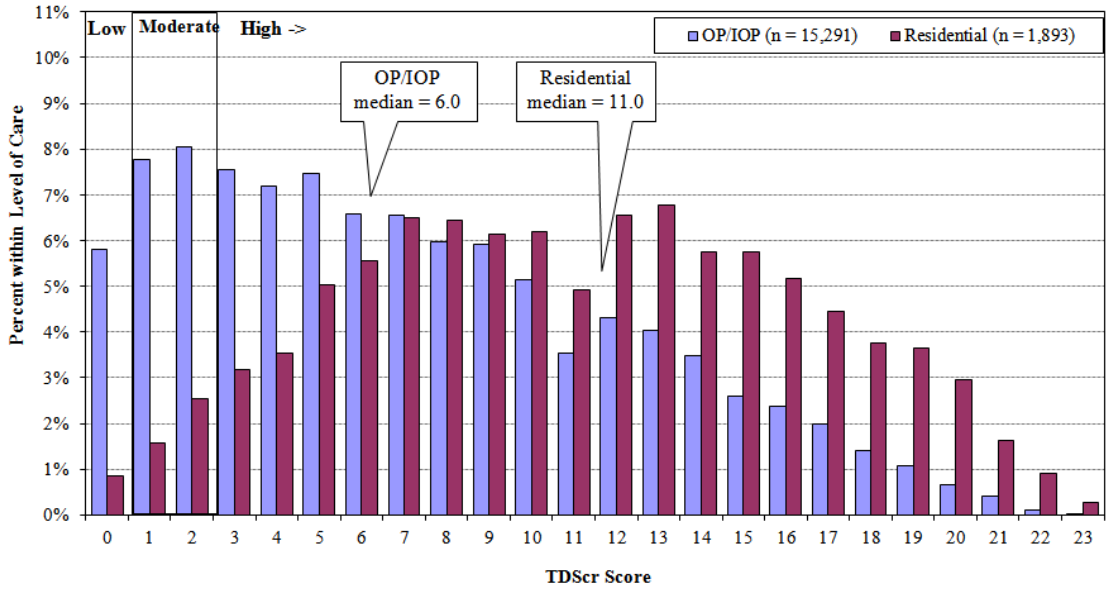
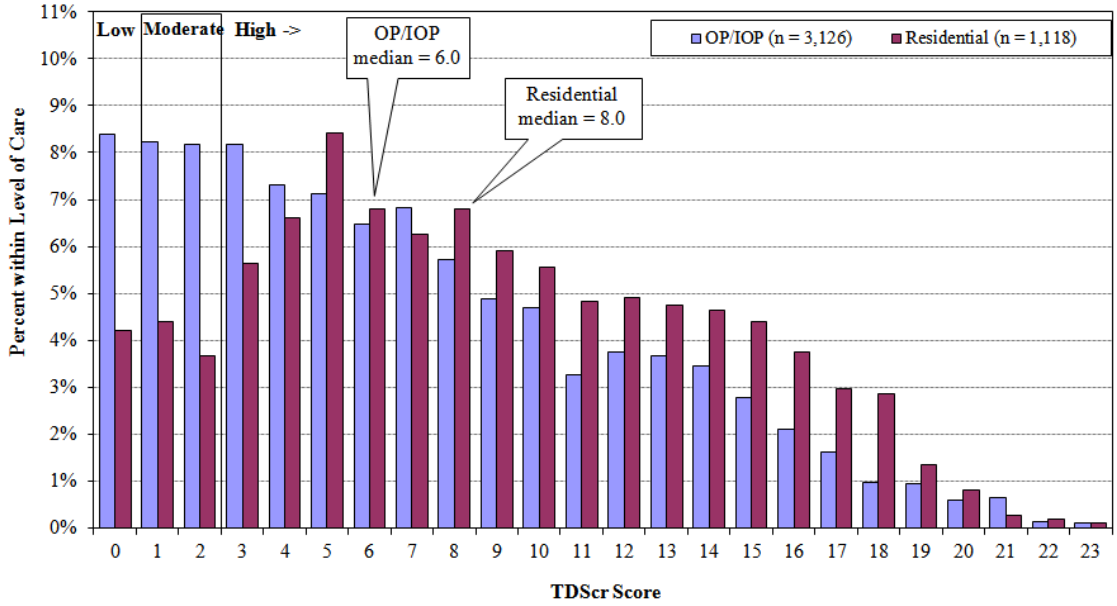


Figure 8. Total Disorder Screener distribution for adults



We also recommend using past-year domain scores in the moderate to high range (1 to 7) to identify specific kinds of behavioral health services that may be needed:

- **Moderate (1 or 2) to high (3+) scores on the Internalizing Disorder Screener** suggest the need for mental health treatment related to somatic complaints, depression, anxiety, trauma, suicide, and, at extreme levels, more serious mental illness (e.g., bipolar, schizoaffective, schizophrenia). If confirmed by a clinician, typical treatments

often include a combination of counseling (e.g., cognitive behavioral therapy, desensitization) and medication.

- **Moderate (1 or 2) to high (3+) scores on the Externalizing Disorder Screener** suggest the need for mental health treatment related to attention deficits, hyperactivity, impulsivity, conduct problems, and, in rarer cases, for gambling or other impulse control disorders. These rates are highest among adolescents but still common in about one in five adults in substance abuse treatment. If confirmed by a clinician, typical treatments often include a combination of counseling (e.g., cognitive behavioral therapy, contingency management, dialectical behavior therapy, multisystemic therapy), increased structure in the environment, contingency management, and medication.
- **Moderate (1 or 2) to high (3+) scores on the Substance Disorder Screener** suggest the need for substance use disorder treatment and, in more extreme cases, detoxification or maintenance services. If confirmed by a clinician, typical treatments often include a combination of counseling (e.g., cognitive behavioral therapy, contingency management, motivational interviewing, community reinforcement approach, functional family therapy) and medication for the management of withdrawal, maintenance, and craving reduction.
- **Moderate (1 or 2) to high (3+) scores on the Crime and Violence Screener** suggest the need for help with interpersonal violence, drug-related crimes, property crimes, and, in more extreme cases, interpersonal or violent crimes. If confirmed by a clinician, typical treatments include a combination of counseling (e.g., anger replacement therapy, cognitive restructuring, cognitive behavioral therapy, contingency management, motivational interviewing, multisystemic therapy) and medication to control impulsive violence and co-occurring problems.

6.2 Interpretation as a measure of change

The past-month symptom count in the TDScr or any of the four subscreeners can also be used as a simple measure of change after intervals of a month or more. This can be used at the individual level to chart the progress of a single client or at the group level as an outcome measure by plotting the measure over time. The current (past year) and long-term (lifetime) measures can also be used to create trajectories and predict risk.

Consider an example where two people both had four past-month symptoms. One person has four lifetime symptoms, and the other has 12. The person with four lifetime symptoms is likely to improve more than the person with 12 because the latter is at a higher risk of relapse for problems that may not be currently present. Conversely, of two people with 12 lifetime symptoms, one who currently is down to four past-month symptoms has a better trajectory than one who still has eight past-month symptoms.

You may also want to examine the extent to which a person with a problem in a given area goes into remission:

- **High severity in early remission**: three or more lifetime problems and no past-month problems.

- **High severity in sustained remission**: three or more lifetime problems and no past-year problems

6.3 Interpretation for quality assurance and program planning

Because of its efficiency and ease of implementation (minimal training and two pages per administration), the GAIN-SS has the potential to help with policy and program planning. This is important because of the rising number of federal, state, and local initiatives that mandate or at least encourage standardized screening across a wide range of systems. These include school, workplace, welfare, and justice systems, many of which are increasingly interested in early identification and intervention related to behavioral health issues. The GAIN-SS can be used as a simple form of needs assessment to help guide program development and planning and decisions about the purchase of further training or technical assistance. Managers can compare staff members or sites on the extent to which expected diagnoses and referrals turn into actual cases.

While there will probably be some overruling by clinicians, on average a clinician's diagnosis should be similar to the results of the GAIN-SS. If one clinician consistently over- or underdiagnoses relative to other clinicians in the same context, it may be an important topic for clinical supervision. Conversely, if several clinicians in the same context are routinely overriding a GAIN-SS decision rule, it may suggest the need for a customized rule in the GAIN-SS or to systemically collect other information on which this group of clinicians is reliably basing their decisions. For program evaluation the GAIN-SS can also be used to evaluate and manage penetration and referral rates and as a measure of change over time.

6.4 Evaluation of penetration and referral rates

Many stakeholders (which may include funders; employers; third-party managed care administrators; agencies spread out over several programs, sites, or subcontractors; multi-site evaluators; or individual clinicians) want to know how well programs and staff members are identifying client problems and making appropriate referrals. A clinician in any given case may override the GAIN-SS triage, but at the group level the GAIN-SS should provide a relatively good estimate of the approximate number of people who should be diagnosed and referred in each of the four screening areas.

By dividing the actual diagnoses, referrals, or services provided by the number predicted, you can get a rate that is adjusted to the case mix of a given program, site, or clinician. For example, consider two programs that each diagnose 10 out of 30 (33%) of their cases with internalizing disorders. The two programs look the same in terms of the raw number of diagnoses (10) and raw referral rate (10 / 30 = 33%). However, if their predicted number of diagnoses (based on IDScr of 1+ out of 5 symptoms) was 15 and 5 respectively, then their rate of actual divided by expected diagnoses would be very different: 10 / 15 = 67% vs. 10 / 5 = 200%. This suggests that the former may be underdiagnosing and that the latter may be overdiagnosing internalizing disorders. Note, however, that just as you

should consider other information (collateral reports, treatment records, etc.) for individual clients, you should also consider all plausible explanations for diagnostic trends at the program level. In short, the GAIN-SS gives you an objective guidepost to compare performance and track it over time.

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APPENDIX:
PSYCHOMETRIC ANALYSES OF THE GAIN-SS SCREENERS

The psychometrics of the GAIN-SS have been created using data from a client population. Since all SS screener items are also found in the GAIN-I, we are able to examine the psychometric properties of the SS screeners using GAIN-I data.

Information is available for specific subgroups of clients, including those categorized by age, gender, and race and ethnicity. Tables with the full array of psychometrics and scale norms can be found on the GAIN Coordinating Center's website (http://gaincc.org/resources). In this appendix, psychometric information on the SS scales is presented for two age groups: adolescents (12–17) and adults (18+). Because screeners are designed to be efficient, we have reviewed both their internal properties and how well they predict the corresponding full-length GAIN-I scale scores in terms of concurrent and discriminant validity.

Alpha reliability

Internal consistency of the SS screeners was examined using Cronbach's alpha. The alpha values for each SS screener appear in Tables A1 (adolescents) and A2 (adults) in the bottom parts of the tables. Screeners with an alpha greater than or equal to .70 are **bolded** in the tables. For comparison, the alphas for the corresponding full-length scales appear along the left side. This is an important comparison because the size of the alpha is directly related to the number of items and will generally go down for a screener with fewer items.

The 23-item Total Disorder Screener has excellent internal consistency for both adolescents (.87) and adults (.88). For adolescents, all four screeners demonstrate good internal consistency as indicated by reliability coefficients greater than or equal to .70. For adults, three of the four screeners demonstrate good internal consistency (Internalizing Disorders, Externalizing Disorders, and Substance Disorders), with Crime and Violence falling just shy of the .70 cutoff. The slightly reduced Crime and Violence internal consistency could be accounted for by adult experiences of criminal and violent behavior, which may be more varied than that represented by the items on the Crime and Violence screener.

Concurrent and discriminant validity

Concurrent and discriminant validity are both subcategories of construct validity (Campbell, 1960). For concurrent validity, we must show that measures of constructs that theoretically *should be* related to each other *are indeed* observed to be related; for discriminant validity, we must show that measures of constructs that theoretically *should not be* related to each another *are indeed* observed to be *unrelated*. In order to support the statement that a measure has construct validity, it is necessary to show evidence for both concurrent and discriminant validity.

Table 1 (adolescents) and Table 2 (adults) display the correlations between each of the SS screeners (columns) with their related full-length GAIN-I scales (rows). The correlations along the tables' diagonals show evidence of strong relationships between the corresponding full-length and shortened scales. For both adolescents and adults, of the five screeners (the fifth is the Total Disorder Screener), four are correlated at or above .90 with their full-length GAIN-I scale, with the fifth's (Crime and Violence) correlation at .89 for adolescents and .88 for adults. This represents strong evidence for concurrent validity given the correspondence (or convergence) between similar constructs.

Along the bottom of Tables 1 and 2, the average nondiagonal correlations are displayed. These are the average correlations between each SS screener and all unrelated full-length GAIN-I scales. To support the claim for discriminant validity, these values should be smaller than the diagonal correlations and, preferably, as small as possible. The values for individual screeners in Table 1 (adolescents) range from .41 to .50. The values for individual screeners in Table 2 (adults) range from .36 to .53. All of the nondiagonal correlations fall well outside the 95% confidence intervals for the diagonal correlations. This pattern of results provides evidence for discriminant validity given that the results discriminate between dissimilar constructs.

The last columns of Tables 1 and 2 show the correlations for the Total Disorder Screener (the total symptom count across the individual screeners) with each of the full-length GAIN-I scales. The Total Disorder *Screener* is expected to be and is most highly correlated with the Total Disorder *Scale*, which is the sum of the full-length scales from the GAIN-I (bottom row). For adolescents, this correlation is .93; for adults, this correlation is .92. While the Total Disorder Screener's correlations with the individual GAIN-I scales (which include all the symptoms on which the Total Disorder Screener is based) are higher than most of the other nondiagonal values in the tables, the Total Disorder Screener's average nondiagonal values (.74 for both adolescents and adults) still fall outside of the 95% confidence interval of the diagonal correlations. This provides strong evidence that the Total Disorder Screener scores are indeed measures of total severity (rather than being driven by any one area).

Efficiency

The main reason for shortening scales is to save time. However, in doing so, we do not wish to damage the accuracy of the measure. The best-case scenario would be to measure efficiently and accurately using the fewest items possible.

The total number of items on the SS screeners as presented in Tables 1 and 2 is 23, while the total number of items in the collection of GAIN-I scales is 131. Thus, the SS screeners as a whole are only 18% the length of their corresponding GAIN-I scales. In addition, the overall correlation between the GAIN-I scales and the GAIN-SS screeners is .93 for adolescents and .92 for adults. As we saw above in the evidence for concurrent validity, the individual SS screeners are also highly correlated with their corresponding GAIN-I scales. Despite the fact that the set of SS screeners is less than one fifth the length of the

corresponding full GAIN-I scales, the SS screeners are able to measure very nearly as accurately.

Dennis and colleagues (2006) introduced a measure of efficiency that can be computed for each screener as defined by Equation 1:

$$(1)\ \text{Efficiency} = \frac{\text{of GAIN–SS screener items / of corresponding GAIN–I scale items}}{\text{diagonal correlation}}$$

Thus, efficiency goes down (good) the fewer the items that are used in the screeners and up (bad) the less the screener is correlated with its corresponding full scale. The efficiency measure can be interpreted as the adjusted percent of items required to get virtually the same measuring information as obtained using the full-length scales. The goal is for all measures to have an efficiency measure less than 1. The efficiency measure for each SS screener is displayed in the bottom parts of Tables 1 and 2. For adolescents these measures range from .15 to .34, while for adults they range from .15 to .33, thus demonstrating quicker measurement without a significant loss of information.

Table A1
Correlations[a] and Other Indicators of Psychometric Quality between GAIN-SS Screeners and GAIN-I Scales
Adolescents (N = 10,625)

Full GAIN-I Scale	GAIN-I No. of Items	GAIN-I Cronbach's Alpha	Internalizing Disorders Screener (IDScrY)	Externalizing Disorders Screener (EDScrY)	Substance Disorders Screener (SDScrY)	Crime & Violence Screener (CVScrY)	Total Disorder Screener (TDScrSS)[b]
Internal Mental Distress Scale (IMDS)	43	0.94	**0.90**	0.55	0.41	0.33	0.70
Externalizing Disorder Combined Scale (BcsPgsSum)[c]	43	0.94	0.53	**0.92**	0.45	0.50	0.83
Substance Problem Scale (SPSy)	16	0.83	0.40	0.43	**0.92**	0.40	0.72
Crime & Violence Scale (CVS)	29	0.90	0.30	0.52	0.39	**0.89**	0.70
Total Disorder Scale (TotSum)[d]	131	0.97	0.73	0.77	0.62	0.63	**0.93**
GAIN-SS Number of Items			6	7	5	5	23
GAIN-SS Cronbach's Alpha			**0.74**	**0.79**	**0.76**	**0.72**	**0.87**
GAIN-SS Efficiency[e]			0.15	0.18	0.34	0.19	0.19
95% CI for diagonal R Lower limit			0.90	0.91	0.92	0.88	0.96
Upper limit			0.91	0.92	0.93	0.89	0.96
Average non-diagonal R[f]			0.41	0.50	0.42	0.41	0.74

[a] All correlations are significant at p<.01.

[b] The Total Disorder Screener includes all the items in the four screeners to the left.

[c] The Externalizing Disorder Combined Scale is calculated by combining the Behavior Complexity Scale (BCS) and the Pathological Gambling Scale (PGS).

[d] The Total Disorder Scale is calculated by combining all the GAIN-I long scales, the Internalizing Mental Distress Scale (IMDS), the Externalizing Disorder Scale (BcsPgsSum), the Crime and Violence Scale (CVS), and the Substance Problem Scale (SPSy) .

[e] Efficiency= (# of screener items/# of full scale items)/**diagonal** correlation

[f] This is the average correlation of the screener with the four (non-diagonal) full GAIN-I scales in the column (not including Total).

Table A2
Correlations[a] and Other Indicators of Psychometric Quality between GAIN-SS Screeners and GAIN-I Scales
Adults (N = 10,175)

Full GAIN-I Scale	GAIN-I No. of Items	GAIN-I Cronbach's Alpha	Internalizing Disorders Screener (IDScrY)	Externalizing Disorders Screener (EDScrY)	Substance Disorders Screener (SDScrY)	Crime & Violence Screener (CVScrY)	Total Disorder Screener (TDScrSS)[b]
Internal Mental Distress Scale (IMDS)	43	0.96	**0.92**	0.64	0.42	0.30	0.77
Externalizing Disorder Combined Scale (BcsPgsSum)[c]	43	0.94	0.59	**0.93**	0.45	0.46	0.83
Substance Problem Scale (SPSy)	16	0.91	0.41	0.44	**0.96**	0.34	0.75
Crime & Violence Scale (CVS)	29	0.87	0.27	0.51	0.32	**0.88**	0.61
Total Disorder Scale (TotSum)[d]	131	0.97	0.79	0.79	0.63	0.51	**0.92**
GAIN-SS Number of Items			6	7	5	5	23
GAIN-SS Cronbach's Alpha			**0.78**	**0.80**	**0.88**	0.66	**0.88**
GAIN-SS Efficiency[e]			0.15	0.17	0.33	0.20	0.19
95% CI for diagonal R Lower limit			0.91	0.93	0.96	0.88	0.92
Upper limit			0.92	0.94	0.96	0.89	0.93
Average non-diagonal R[f]			0.42	0.53	0.39	0.36	0.74

[a] All correlations are significant at p<.05. All diagonal correlations are significant at p<.001.

[b] The Total Disorder Screener includes all the items in the four screeners to the left.

[c] The Externalizing Disorder Combined Scale is calculated by combining the Behavior Complexity Scale (BCS) and the Pathological Gambling Scale (PGS).

[d] The Total Disorder Scale is calculated by combining all the GAIN-I long scales, the Internalizing Mental Distress Scale (IMDS), the Externalizing Disorder Scale (BcsPgsSum), the Crime and Violence Scale (CVS), and the Substance Problem Scale (SPSy) .

[e] Efficiency= (# of screener items/# of full scale items)/**diagonal** correlation

[f] This is the average correlation of the screener with the four (non-diagonal) full GAIN-I scales in the column (not including Total).

Validation of interpretive cut-points

The GAIN-SS cut-points were validated based on sensitivity (the percentage of people with disorders on the full GAIN-I correctly identified by the SS), specificity (percentage of people without a disorder on the full GAIN-I correctly excluded by the SS), and the percentage of area under the curve (AUC) in a receiver operating characteristics (ROC) analysis plotting the sensitivity (y-axis) against 1 minus specificity (x-axis). The optimal cut-point is the one closest to or above 90% sensitivity, 90% specificity, and 90% of the curve's area under the respective graph's upper left corner (with values of 80% being good and 70% being fair). These analyses were done separately for adolescents and adults for the total SS and for each of the four individual screeners.

Table A3 shows the sensitivity, specificity, and area under the curve for cut-points of 1 or more, 2 or more, and 3 or more symptoms on the total and each of the four screeners relative to respective diagnoses for that dimension for both adolescents and adults. For the Total Disorder Screener, it takes a cut-point of 2 or more for adolescents and adults to get an acceptable balance of sensitivity and specificity. The Total Disorder Screener was very well behaved, with 98% of the area under the curve for both adolescents and adults.

For both adolescents and adults, all of the screeners have at least 92% of their area under the curve. However, as illustrated in Table 3, there is no one optimal cut-point with at least 90% sensitivity and specificity across all the screeners, though optimal cut-points for both adolescents and adults are identical. A cut-point of 1 is optimal for both adolescents and adults for the Externalizing Disorders, Substance Disorders, and Crime and Violence Screeners; a cut-point of 2 is optimal for both adolescents and adults on the Internalizing Disorders Screener. Having only one cut-point would potentially enable the sorting of clients into those who *probably do* and *probably don't* have actual problems as identified by the full GAIN-I scales.

Because the value of the single cut-point varies by scale, with cut-points of 1 and 2 both identified as optimal depending on the scale, we chose to approximate sorting clients into three triage groups based on their screener scores. A score of 0 indicates "unlikely diagnosis," 1-2 indicates "possible diagnosis," and 3 or more indicates "probable diagnosis." This is a reasonable approach given that the lower cut-point (1) has at least 90% sensitivity for all but the Substance Disorders Screener for adolescents and all but the Externalizing Disorders Screener for adults. Even so, the sensitivities of these scales that do not reach the preferred minimum of 90% are very close, in the upper 80s. For these scales in their respective client groups, there is a slightly increased risk for overidentification of cases deemed "possible diagnosis," when in fact there would not be a diagnosis on the longer scale. In addition, the upper cut-point (3) has at least 90% specificity for all screeners for both adolescents and adults (with the lowest specificity value at 97% for this cut-point). Thus by using a cut-point of 3 to separate those who *possibly do* and *probably do not* have a diagnosis, there is very little risk of mistakenly identifying someone as having a diagnosis when in truth they do not.

Comparisons of the ROC curves by age suggest that the SS worked slightly better for adults on the Internalizing Disorders and Substance Disorders Screeners, while for adolescents, the SS worked slightly better on the Externalizing Disorders and Crime and Violence Screeners.

Table A3
Sensitivity, Specificity, and Area under the Curve (AUC) between GAIN-Q3 Cut-Points and Self-Reported GAIN-I Diagnoses by Age[a,b]

		Adolescent (n = 10,625)			Adult (n = 10,167)		
Screener	Cutoff	% Sensitivity	% Specificity	% AUC	% Sensitivity	% Specificity	% AUC
Internalizing Disorders Screener (IDScrY)	≥1	**98**	67		**100**	60	
	≥2	87	90	**95**	**95**	85	**97***
	≥3	66	**98**		81	**97**	
Externalizing Disorders Screener (EDScrY)	≥1	**90**	**100**		86	**100**	
	≥2	77	**100**	**95**	70	**100**	**93***
	≥3	60	**100**		53	**100**	
Substance Disorders Screener (SDScrY)	≥1	88	**100**		**91**	**100**	
	≥2	69	**100**	**94**	79	**100**	**96***
	≥3	49	**100**		68	**100**	
Crime & Violence Screener (CVScrY)	≥1	**94**	85		**93**	82	
	≥2	65	**99**	**94**	57	**99**	**92***
	≥3	43	**100**		33	**100**	
Total Disorder Screener (TDScrSS)	≥1	**98**	69		**98**	70	
	≥2	**92**	**97**	**98**	**93**	**96**	**98**
	≥3	84	**100**		87	**100**	

[a] Sensitivity is the percent of people with a diagnosis on the GAIN-I who are correctly identified by a screener at or above a given cut point; specificity is the percent of people without a diagnosis who are correctly rejected by the screener at or above a given cut point; AUC is the area under the curve formed by the value for 1 minus specificity on the x-axis and the sensitivity value on the y-axis.
[b] Results are relative to detecting a moderate or high problem on each screener's corresponding full GAIN-I scale.
[c] These AUC values are significantly different by age at $p < .05$.

GAIN SHORT SCREENER (GAIN-SS) 3.0

Chestnut Health Systems

GAIN GLOBAL APPRAISAL OF INDIVIDUAL NEEDS Coordinating Center

GAIN Short Screener (GAIN-SS)
Version [GVER]: GAIN-SS ver. 3.0

What is your name? a._____ b. ____ c. _____
(First name) (M.I.) (Last name)

What is today's date? (MM/DD/YYYY) |__|__| / |__|__| / 20 |__|__|

The following questions are about common psychological, behavioral, and personal problems. These problems are considered **significant** when you have them for two or more weeks, when they keep coming back, when they keep you from meeting your responsibilities, or when they make you feel like you can't go on. After each of the following questions, please tell us the last time, if ever, you had the problem by answering whether it was in the past month, 2 to 3 months ago, 4 to 12 months ago, 1 or more years ago, or never.	Past month	2 to 3 months ago	4 to 12 months ago	1+ years ago	Never
	4	3	2	1	0
IDScr 1. **When was the last time** that you had **significant** problems with…					
a. feeling very trapped, lonely, sad, blue, depressed, or hopeless about the future?	4	3	2	1	0
b. sleep trouble, such as bad dreams, sleeping restlessly, or falling asleep during the day?	4	3	2	1	0
c. feeling very anxious, nervous, tense, scared, panicked, or like something bad was going to happen?	4	3	2	1	0
d. becoming very distressed and upset when something reminded you of the past?	4	3	2	1	0
e. thinking about ending your life or committing suicide?	4	3	2	1	0
f. seeing or hearing things that no one else could see or hear or feeling that someone else could read or control your thoughts?	4	3	2	1	0
EDScr 2. **When was the last time** that you did the following things **two or more times**?					
a. Lied or conned to get things you wanted or to avoid having to do something	4	3	2	1	0
b. Had a hard time paying attention at school, work, or home.	4	3	2	1	0
c. Had a hard time listening to instructions at school, work, or home.	4	3	2	1	0
d. Had a hard time waiting for your turn.	4	3	2	1	0
e. Were a bully or threatened other people.	4	3	2	1	0
f. Started physical fights with other people	4	3	2	1	0
g. Tried to win back your gambling losses by going back another day.	4	3	2	1	0
SDScr 3. **When was the last time** that…					
a. you used alcohol or other drugs weekly or more often?	4	3	2	1	0
b. you spent a lot of time either getting alcohol or other drugs, using alcohol or other drugs, or recovering from the effects of alcohol or other drugs (e.g., feeling sick)?	4	3	2	1	0
c. you kept using alcohol or other drugs even though it was causing social problems, leading to fights, or getting you into trouble with other people?	4	3	2	1	0
d. your use of alcohol or other drugs caused you to give up or reduce your involvement in activities at work, school, home, or social events?	4	3	2	1	0
e. you had withdrawal problems from alcohol or other drugs like shaky hands, throwing up, having trouble sitting still or sleeping, or you used any alcohol or other drugs to stop being sick or avoid withdrawal problems?	4	3	2	1	0

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GAIN GLOBAL APPRAISAL OF INDIVIDUAL NEEDS Coordinating Center

(Continued) After each of the following questions, please tell us the last time, if ever, you had the problem by answering whether it was in the past month, 2 to 3 months ago, 4 to 12 months ago, 1 or more years ago, or never.	Past month	2 to 3 months ago	4 to 12 months ago	1+ years ago	Never
	4	3	2	1	0

CVScr 4. **When was the last time** that you…

a. had a disagreement in which you pushed, grabbed, or shoved someone?	4	3	2	1	0
b. took something from a store without paying for it?	4	3	2	1	0
c. sold, distributed, or helped to make illegal drugs?	4	3	2	1	0
d. drove a vehicle while under the influence of alcohol or illegal drugs?	4	3	2	1	0
e. purposely damaged or destroyed property that did not belong to you?	4	3	2	1	0

5. Do you have other **significant** psychological, behavioral, or personal problems that you want treatment for or help with? (**Please describe**) ..... Yes 1 No 0

v1. _____

_____

6. What is your gender? (If other, please describe below) 1 - Male 2 - Female 99 - Other

v1. _____

7. How old are you today? |__|__| Age

7a. How many minutes did it take you to complete this survey? |__|__|__| Minutes

Staff Use Only

8. Site ID: _____ Site name v. _____
9. Staff ID: _____ Staff name v. _____
10. Client ID: _____ Comment v. _____
11. Mode: 1 - Administered by staff 2 - Administered by other 3 - Self-administered
13. Referral: MH ____ SA ____ ANG ____ Other ____ 14. Referral codes: _____
15. Referral comments: v1. _____

Scoring

Screener	Items	Past month (4)	Past 90 days (4, 3)	Past year (4, 3, 2)	Ever (4, 3, 2, 1)
IDScr	1a – 1f				
EDScr	2a – 2g				
SDScr	3a – 3e				
CVScr	4a – 4e				
TDScr	1a – 4e				

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GAIN Short Screener 3.0
Interviewer Instruction Sheet

1. Introduction (read to the participant)

To help us get a better understanding of any problems you might have, how those problems are related to each other, and what kind of services might help you the most, I would like to spend about 5 to 10 minutes asking you some questions as part of a short screener that we use with many of our clients. Your answers are private and will be used only for your treatment and to help us evaluate our own services.

Please answer each question as accurately as you can. If you are not sure about an answer, please give us your best guess. If you simply do not know the answer to a question, you can tell me and I'll enter "DK" for that item. You may also refuse to answer any question, and I'll enter "RF" for that item. Please ask if you do not understand a question or a word. At the end of the interview, I will check to make sure that everything is complete, and I'll answer any additional questions.

Do you have any questions before we begin?

---

2. Cognitive Impairment Screener

Because we are going to ask you a lot of questions about when and how often things have happened, I need to start by getting a sense of how well your memory is working right now.

a. What year is it now?
(Circle 4 for any error) 0 4

b. What month is it now?
(Circle 3 for any error) 0 3

Please repeat this phrase after me: John Brown, 42 Mark Street, Detroit.
(No score—used for f below)

b. About what time is it?
(Circle 3 for any error) 0 3

d. Please count backwards from 20 to 1.
[20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1]
(Circle 2 for one error, 4 for 2 or more errors).....0 2 4

e. Please say the days of the week in reverse order.
[Sat, Fri, Thurs, Wed, Tues, Mon, Sun]
(Circle 2 for one error, 4 for 2 or more errors).....0 2 4

f. Please repeat the phrase I asked you to repeat before.
[John / Brown / 42 / Mark Street / Detroit]
(Circle 2 for each subsection of /text/ missed) ...0 2 4 6 8 10

g. **(Add up scores from a through f and record)** ..... |__|__|

3. Time frame anchoring

30-day anchor

Several questions will ask you about things that may have happened during the past month, 2 to 3 months ago, 4 to 12 months ago, or more than 12 months ago. To help you remember these time periods, please look at this calendar. First, we will establish a 30-day anchor date. Do you recall anything that was happening on [30-DAY ANCHOR DATE]?

30-day anchor: v. _____

If the last time something happened was between [30-DAY ANCHOR] and now, please answer, "past month."

90-day anchor

Next, we'll establish a 90-day anchor date. Do you recall anything that was happening on [90-DAY ANCHOR DATE]?

90-day anchor: _____

If the last time something happened was between [90-DAY ANCHOR] and [30-DAY ANCHOR], please answer, "2 to 3 months ago."

12-month anchor

Finally, we'll establish a 12-month anchor date. Do you recall anything that was happening on [12-MONTH ANCHOR DATE]?

12-month anchor: v. _____

If the last time something happened was between [12-MONTH ANCHOR DATE] and [90-DAY ANCHOR DATE], please answer, "4 to 12 months ago." If the last time something happened was before [12-MONTH ANCHOR DATE], please answer, "More than 12 months ago." And if something never happened, please answer, "Never."

---

4. Response choices for the GAIN Short Screener

Please use these response choices when answering the questions on the GAIN Short Screener:

Past month 4
2 to 3 months ago 3
4 to 12 months ago 2
1+ years ago 1
Never 0

GAIN Short Screener 3.0
Self-Administration Instruction Sheet

Thank you for completing this screener! Before you begin, a staff member will fill in some information and will read a brief introduction. The staffer may also work with you to establish some memory anchors (which we'll write on the opposite side of this sheet) and give you a brief mental checkup to make sure that you're able to complete this form. The staffer will then give you a paper copy of the screener or will set you up on a computer to fill in the responses on screen.

To complete the screener:

- Fill in your name and the date, and note the time in the margin or on a piece of scratch paper.
- Read the transition statement ("The following questions are about…"), then start with the first item and continue in order.
- Most of the items are answered with a time frame:

Past month 4
2 to 3 months ago.....3
4 to 12 months ago.....2
1+ years ago 1
Never 0

- Select the most accurate response for each item, or the one that comes closest to how you feel.
- We encourage you to complete all the items, but you can refuse any question that you really feel uncomfortable answering. If you refuse an item, we ask you to mark it with "RF" (for "refused") in the margin on the paper version or by clicking the DK/RF icon and selecting "RF." It is important that you answer every question or write "DK" or "RF." Otherwise, we will think that you just missed the answer by mistake and will ask you about it again.
- For item 5 on the second page of the paper version (Do you have other significant psychological, behavioral, or personal problems that you want treatment for or help with?), please write neatly. You can write "None" if applicable. If you need more space, you can also use the margin or a sheet of paper, or click the notebook icon on the computer. You can write as much or as little as you like.
- For item 6, enter your gender. If "other," use the field below the item to specify how you identify yourself.
- For item 7, fill in your age as of today.
- For item 7a, enter the number of minutes the screener took to complete, or enter the time at that moment and a staffer will determine the total time to complete.
- Please feel free to ask if you do not understand a question or word. You can also put a question mark (?) next to something you don't understand or by using the notes icon on the computer version, and we can go over it when you are done.
- Please don't fill in the Staff Use Only box at the bottom of the second page. Staffers will use it to record administrative information and the totals from the assessment.

Time frame anchoring

Several questions will ask you about things that may have happened during the past month, 2 to 3 months ago, 4 to 12 months ago, or more than 12 months ago. To help you remember these time periods, we will establish memory anchors to help you recall the different time frames.

30-day anchor

30-day anchor: v. _____

If the last time something happened was between this event and now, please answer, "past month."

90-day anchor

90-day anchor: _____

If the last time something happened was between this event and your 30-day anchor, please answer, "2 to 3 months ago."

12-month anchor

12-month anchor: v. _____

If the last time something happened was between this event and your 90-day anchor, please answer, "4 to 12 months ago." If the last time something happened was before your 12-month anchor, please answer, "More than 12 months ago." And if something never happened, please answer, "Never."