GAIN

Global Appraisal of Individual Needs

Data Manager Manual

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CHESTNUT
HEALTH SYSTEMS

Preface

This manual is designed to provide GAIN Data Managers with all the necessary procedures and instructions to successfully manage data gathered using the Global Appraisal of Individual Needs (GAIN) within their site. In addition, this manual will provide an overview of the GAIN family of instruments and the GAIN Coordinating Center, located in Normal, IL.

The goal of this manual is to prepare and provide support to a Data Manager who will be managing data collected by the GAIN family of assessment instruments. These GAIN instruments include the GAIN-Initial, the GAIN-Monitoring 90 Days follow-up, the GAIN-Q3, the Treatment Satisfaction Index, and the GAIN Short Screener.

The manual is divided into the following chapters:

Introduction to GAIN Data Processing. The introduction presents an overview of the GAIN family of instruments and the GAIN Coordinating Center (GCC), and GAIN data management.

Chapter 1: Data Manager Role. This chapter outlines the role of the Data Manager.

Chapter 2: GAIN Data Preparation. This chapter includes instructions on how to prepare the GAIN data for export by the GAIN Data Management Team at Chestnut Health Systems and the deadlines involved.

Chapter 3: GAIN Edits. This chapter describes the purpose of the GAIN Edits and what is expected of the Data Manager.

Several appendixes follow the chapters:

Appendix A: Data Manager Technical Information and Support

Appendix B: GAIN Help Contacts

Note: some of the material in this manual was adapted from other GAIN-related manuals and training materials, especially *Global Appraisal of Individual Needs: Trainer's Training Manual and Resources* (2006), by Michael L. Dennis, Michelle White, Janet C. Titus, and Joan Unsicker. Where possible, credit has been given to the original authors.

Data Management

Data management services are designed to help programs maintain valid and reliable assessment data to support clinical-decision making and program planning. Assessment data is cleaned and combined into full datasets and reports to help evaluate programs, monitor performance and plan for the long term. There are several GAIN Data Management Services to choose from and vary from GAIN edits and data cleaning to customizable management and evaluation reports.

Data management allows for data collected using the GAIN to be used in research that will improve the treatment that clients receive, support clinical decision-making, and provide evaluators with preliminary outcome trends of study clients (if follow-up GAIN assessments are collected).

Data management provides clinicians and others administering the assessment with clear feedback on the quality of the data that they collect as well as an avenue to resolve data anomalies and prevent them from reoccurring. The data cleaning process done by the GAIN Data Management Team at Chestnut Health Systems allows for mistakes, inconsistencies, and other data errors to be corrected, which leads to more accurate and valid datasets.

Researchers, clinicians, and others can use the datasets created through the data management process described in this manual to measure preliminary treatment outcomes and assist agencies in making knowledgeable treatment placements for all clients in need of substance abuse treatment.

GAIN Instruments

There are three main measures that make up the GAIN family of assessment instruments:

The **GAIN-I (Initial)** is a full biopsychosocial assessment that integrates research and clinical assessment to provide diagnoses, placement and individualized treatment planning, performance monitoring, program evaluation, and economic analysis. It is the most in-depth instrument in the GAIN family and is designed to collect as much information in the client's initial assessment as would often be collected in their first few months of treatment. The GAIN-I produces several reports that can be used by clinicians and managers as well as by researchers.

The **GAIN-M90 (GAIN- Monitoring 90 Days)** is a quarterly follow-up used to monitor clients' response to treatment as well as their general physical, mental, and environmental health since their last assessment. The GAIN-M90 has many of the same questions contained in the GAIN-I, but since it is largely a subset of the full GAIN-I it has fewer questions.

The **GAIN-Q3 (GAIN-Quick)** is a subset of items from the full GAIN-I assessment and is designed to streamline the referral process. The GAIN-Q3 Standard consists of nine screeners (Background, School Problems, Work Problems, Physical Health, Sources of Stress, Risk Behaviors and Infectious Diseases, Mental Health, Substance Use, and Crime and Violence) that estimate the severity of problems and the recency of treatment participation in each life area represented. The GAIN-Q3 can be used to support brief interventions, and its data can also be imported into the GAIN-I.

Additional support and training can be requested to process the GAIN Short Screener and the Treatment Satisfaction Index.

The **GAIN-Short Screener (GAIN-SS)** is designed for use in general populations to quickly and accurately identify people who would be flagged on the full GAIN as having a drug dependency or mental health disorder. The GAIN-SS is a much shorter instrument, only two pages, containing one total scale (20 symptoms) comprised of 4 subscales (5 symptoms each). The subscales are based on a series of exploratory and confirmatory factor analyses of psychiatric symptoms and disorders among clinical samples.

The **Treatment Satisfaction Index (TxSI)** is a one-page assessment designed to measure the working relationship between treatment staff and client as well as measure clients' early treatment satisfaction. The TxSI should be administered during the second treatment session or second night in a residential program, and no later than the fifth treatment session or the fifth day in inpatient treatment.

Global Appraisal of Individual Needs (GAIN) overview

Development and purpose

The Global Appraisal of Individual Needs (GAIN)[1] originated in 1993 as a collaboration between clinicians, researchers, and policymakers from over a dozen behavioral healthcare agencies to create a comprehensive biopsychosocial assessment tool. It is a progressive and integrated series of measures and computer applications designed to support a number of treatment practices, including initial screenings; brief interventions; referrals; standardized clinical assessments for diagnosis, placement, and treatment planning; monitoring of changes in clinical status, service utilization, and costs to society; and subgroup- and program-level needs assessment and evaluation.

Utilization

The GAIN is an evidence-based assessment used with both adolescents and adults and in outpatient, intensive outpatient, partial hospitalization, methadone, short-term residential, long-term residential, therapeutic community, and correctional programs. It has been adopted by hundreds of agencies and systems of care in communities ranging from large urban areas (Chicago, Los Angeles, Miami, New York City, Oakland) to moderately sized and small urban

communities (Bloomington, IL; Farmington, CT; Mobile, AL; Peoria, IL; Phoenix and Tucson, AZ; and St. Petersburg, FL) and rural areas and reservations (Four Corners, NM; Iowa City, IA; Madison County, IL; Sault Ste. Marie, MI; Seven Counties, KY). It is used as the core clinical and research measure across several major multisite studies, including the Adolescent Residential Treatment (ART) program, the Co-occurring Disorder program, the Adolescent Treatment Model (ATM) program, the Assertive Continuing Care (ACC) experiment, the Cannabis Youth Treatment (CYT) experiment, the Drug Outcome Monitoring System (DOMS), the Early Re-Intervention (ERI) experiment, Mothers at the Crossroads, the Persistent Effect of Treatment Study (PETS), Strengthening Communities for Youth (SCY), and Reclaiming Futures (RF). The GAIN was also used as the primary research and clinical measure for each cohort of Assertive Adolescent and Family Therapy grant (AAFT) and was recommended for use in the Juvenile Treatment Drug Court (JTDC), Adult Treatment Drug Court (ATDC), Drug Court (DC), Young Offender Reentry Program (YORP), Offender Reentry Program (ORP), and Targeted Capacity Expansion (TCE), (SAT-ED), (SYT-ED), and SYT-I grants. Funding for these studies has come from the Center for Substance Abuse Treatment (CSAT), the Interventions Foundation, the National Institute on Drug Abuse (NIDA), the National Institute on Alcohol Abuse and Alcoholism (NIAAA), and the Robert Wood Johnson Foundation (RWJF).

The sites that are not part of a grant program funded through CSAT are regional sites who have implemented the GAIN county-wide, state-wide, or region-wide. There are also agencies who independently contract for data services to use the GAIN agency-wide. These regional and independent agencies submit their data to the GAIN Data Management Team to ensure valid and reliable data (i.e. CT-DCF, Idaho, Seattle/King County, UGA). These sites could include justice systems or treatment centers within a county, using the GAIN as a placement tool or any of the other various great reasons to use the GAIN family of instruments to help provide the best treatment possible to individuals with substance abuse and or mental health issues. In addition, Recidivism Reduction Initiative (RRI) utilizes the GAIN with the funding of OJS/BIA.

Content

The GAIN has eight core sections (Background, Substance Use, Physical Health, Risk Behaviors and Disease Prevention, Mental and Emotional Health, Environment and Living Situation, Legal, and Vocational). Each section contains questions on the recency of problems, breadth of symptoms, and recent prevalence as well as lifetime service utilization, recency of utilization, and frequency of recent utilization. The items are combined into over 100 scales and subscales that can be used for DSM-IV–based diagnoses,[2] ASAM-based level-of-care placement,[3] JCAHO-based treatment planning,[4] and DOMS-based outcome monitoring.[5] The GAIN also includes items designed to support most state and federal reporting requirements, to compare to community samples from the National Household Survey on Drug Abuse (NHSDA),[6] and to estimate changes in the cost to society based on the work of Dr. Michael French and his colleagues.

Applications

GAIN materials are available in hard copy and electronic forms. The GAIN can be administered by computer or with paper and pencil, and clients with sufficient cognitive functioning can self-administer it. The computer applications are written in an Assessment Building System (ABS)[7] and tailored to address HIPAA security concerns. They are scalable to multiple types and levels of platforms and able to export the data to an ASCII file, and they can be used to generate individual or group-level reports on demand. Existing reports produced by ABS can identify and correct key-rekey responses, maintain internal consistency across questions, identify methodological red flags, and generate interpretation and recommendation reports in both statistical and narrative forms for clinical use. ABS can be used to create individualized versions of the GAIN, adding subsets of items to the Core group of required items. The applications conduct range checks, follow response skips, add notes, and generate code to export the data into other software (such as SPSS and SAS), and they can import modules for new forms, reports, or functions.

Norms

The psychometrics of the GAIN and the scale norms have been established for both adults and adolescents overall and by level of care (within age). Using the diverse data collected in the abovementioned studies, we are in the process of generating additional norms by gender and race as well as looking at variability in the degree of co-occurring mental disorders and involvement in family, school, work, welfare, and juvenile and criminal justice systems.

Scales and internal consistency

The GAIN includes over 100 scales and indices. Most of these scales have two to four subscales. The following article link demonstrates that the psychopathology scales consistently fall into four main statistical dimensions across age and level of care: substance problem severity (.90), internal mental distress (.94), external behavior problems (.91), and crime and violence (.90).[8] (https://chestnut.box.com/s/m2r779gm6qxfqn7t21ttw48y4cbgy88l) Other scales provide measures of personal strengths, spirituality, and reasons for and readiness to quit using alcohol and other drugs. Key indices and their alphas for adolescents and adults (where applicable):

Scale Index	Adolescent alpha	Adult alpha
Substance Problem Scale (Lifetime)	.90	.90
Substance Frequency Scale	.79	.77
Current (Past Week) Withdrawal Scale	.92	.95
Health Distress Scale	.66	.79
Health Problem Scale	.74	.86
Cognitive Impairment Scale	Summative	Summative
Internal Mental Distress Scale	.94	.97
Traumatic Stress Scale	.92	.96
Behavior Complexity Scale	.94	.96
Emotional Problem Scale	.80	.86

Treatment Resistance Index	Summative	Summative
Treatment Motivation Index	Summative	Summative
Self-Efficacy Scale	.73	.72
Problem Orientation Scale	Summative	Summative
Environmental Risk Index	.71	.63
Recovery Environment Risk Index	Summative	Summative
General Conflict Tactic (Violence) Scale	.85	.89
General Victimization Scale	.84	.86
Personal Sources of Stress Index	Summative	Summative
Other Sources of Stress Index	Summative	Summative
General Social Support Index	Summative	Summative
Illegal Activities Scale	.84	.86
Employment Activity Scale	.94	.96
Training (School) Activity Scale	.93	.91

Reliability and validity

Studies with adults and adolescents have found good reliability in test/retest situations on days of use and symptom counts (r = .7 to .8), as well as diagnosis (kappa of .5 to .7). Self-reports were consistent (kappa in the .5 to .8 range) with parent reports, on-site urine and saliva testing, and laboratory-based EMIT and GC/MS urine testing. In fact, self-reports on the GAIN were found to be consistent with a multi-method estimate based on any self-report or positive urine or saliva test for any drug (kappa = .56), cocaine (kappa = .52), opioids (kappa = .55), and marijuana (kappa = .75), with no one method being superior across all drugs.[9, 10] Using discriminant analysis, the GAIN scales could also reliably predict independent and blind staff psychiatric diagnoses of co-occurring psychiatric disorders including ADHD (kappa = 1.00), Mood Disorders (kappa = .85), Conduct Disorder/Oppositional Defiant Disorder (kappa = .82), Adjustment Disorder (kappa = .69), or the lack of a non-substance use diagnosis (kappa = .91) and to discriminate the primary other disorders across these conditions (kappa = .65).[11]

References

[1] Dennis, M. L., White, M. K., Titus, J. C., & Unsicker, J. I., (2006). *Global Appraisal of Individual Needs (GAIN): Administration guide for the GAIN and related measures (Version 5)*. Bloomington, IL: Chestnut Health Systems. Retrieved October 13, 2006, from http://www.chestnut.org/LI/gain/GAIN_I/GAIN-I_v_5-4/Index.html.

[2] American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders (DSM-IV-TR)* (4th rev. ed.). Washington, DC: American Psychiatric Association.

[3] American Society of Addiction Medicine (ASAM). (2001). *Patient placement criteria for the treatment for substance-related disorders* (2nd rev. ed.). Chevy Chase, MD: American Society of Addiction Medicine.

[4] Joint Commission on Accreditation of Healthcare. (2002). *Accreditation manual for mental health, chemical dependency, and mental retardation/developmental disabilities services: Vol. 1. Standards*. Oakbrook Terrace, IL: Author.

[5] Dennis, M. L., Scott, C. K, Godley, M. D., & Funk, R. (1999). Comparisons of adolescents and adults by ASAM profile using GAIN data from the Drug Outcome Monitoring Study (DOMS): Preliminary data tables. Bloomington, IL: Chestnut Health Systems. Retrieved October 13, 2006, from http://www.chestnut.org/li/posters/asamprof.pdf.

[6] Office of Applied Statistics (OAS). (1996). *National Household Survey on Drug Abuse (NHSDA): Main findings* (DHHS Publication No. (SMA)96-3085). Rockville, MD: Substance Abuse and Mental Health Services Administration.

[7] Hodgkins, D., West, J., Dennis, M. L., & Chestnut Health Systems. (2005). *Assessment Building System (ABS)*. Bloomington, IL: Chestnut Health Systems. Retrieved October 13, 2006, from http://www.chestnut.org/LI/ABS/Index.html.

[8] Dennis, M. L., Chan, Y.-F., & Funk, R. (2006). Development and validation of the GAIN Short Screener (GSS) for psychopathology and crime/violence among adolescents and adults. *American Journal on Addictions*. https://chestnut.box.com/s/m2r779gm6qxfqn7t21ttw48y4cbgy88l

[9] Lennox, R. D., Dennis, M. L., Scott, C. K., & Funk, R. R. (2006). Combining psychometric and biometric measures of substance use. *Drug and Alcohol Dependence*, *83*, 95-103.

[10] Lennox, R., Dennis, M. L., Ives, M., & White, M. K. (2006). The construct and predictive validity of different approaches combining urine and self-reported drug use measures among adolescents in substance abuse treatment. *American Journal on Addictions*. https://chestnut.box.com/s/uf0v548ui81wmq777b4i7lov1gxxf4gg

[11] Shane, P., Jasiukaitis, P., & Green, R. S. (2003). Treatment outcomes among adolescents with substance abuse problems: The relationship between comorbidities and post-treatment substance involvement. *Evaluation and Program Planning*, *26*, 393-402.

Overview of the GAIN Coordinating Center (GCC)

In 2003, the GAIN Coordinating Center was created to support the use and dissemination of GAIN instruments and help bridge the gap between science and practice. The GCC is primarily responsible for training on and implementation of the GAIN family of instruments. This includes but is not limited to holding trainings for clinicians and site interviewers who will administer the GAIN to clients, providing quality assurance feedback to interviewers while going through certification to reach mastery-level of GAIN administration, holding trainings for sites to learn the process of managing data, creating tools to make GAIN implementation easier, and providing software to administer the GAIN interactively.

GAIN Data Management Team Services

The GAIN Data Management Team offers a wide range of services:

Core Data Quality Report* – The GAIN Data Management Team reviews GAIN assessments and provides written feedback on GAIN items that are critical to data validity and program evaluation. This feedback provides the opportunity to review and address any missing or inconsistent data with clients and make appropriate updates to assessment records in GAIN ABS.

Comprehensive Staff Training Report* – The GAIN Data Management Team reviews GAIN assessments and provides written feedback specific to staff administration that will help train interviewers to collect reliable and valid information. *This is an add-on to the Core Data Quality Report.*

Data Cleaning & TA support* – The GAIN Data Management Team cleans GAIN data and make updates to a site's GAIN dataset when able. Training assistance is also given to the designated data manager on how to best review and make updates in GAIN ABS, how to submit GAIN Edit reply files for review, and additional assistance is offered as needed. Customer service and support is also given for each local agency. *This can be selected as a standalone service or added to the Core Data Quality Report and/or Staff Training Report.*

*These package are offered, for the GAIN-I, GAIN-M90, and GAIN-Q3, yearly, quarterly, or monthly.

The GAIN Data Management Team also offers customized **evaluation** and **management reports** as well as **Analytic Datasets & Site Profiles**. The Site Profiles Report is a great option if an agency needs overall data characteristics of their client population for grant proposal submissions, and/or if they have any reports that need to be submitted to leadership, county, state, etc. This report is offered yearly or quarterly.

Our GAIN Data Management Services are designed to help sites maintain valid and reliable assessment data to support clinical decision-making about diagnosis, placement, treatment planning, and program evaluation.

Training and certification

The GCC offers additional trainings to help each site successfully implement the use of the GAIN at their agency and maintain that success throughout the implementation and maintenance process. Some of the additional trainings include:

GAIN trainings for the GAIN-I and GAIN-Q3 take a distance-learning approach that make training more affordable and individualized. Trainees complete self-paced online coursework, participate in conference calls and webinars, and receive one-on-one coaching and practice with our GAIN Administration Quality Assurance Team (on-site training available upon request).

GAIN ABS offers helpful guidance and documentation to learn how to navigate the GAIN ABS system through a user-friendly tour guide. These tours give an overview of how to administer the GAIN interactively, create a client record, generate reports, and edit assessments within the online GAIN ABS software.

Data Manager Online Trainings are designed to provide Data Managers step by step instructions, including how to maintain and enter cases into GAIN ABS, editing cases in GAIN ABS, and ensuring all data is accurate and valid at the point of submission. Please make sure to contact DataSubmit@chestnut.org for more information.

These trainings are just a sample of the trainings that the GCC can provide to help sites use the GAIN family of instruments. For further questions or to inquire about holding trainings, please contact GAINInfo@chestnut.org or visit our website at www.gaincc.org.

Contact

We at the GAIN Coordinating Center are dedicated to providing our clients with high quality services and helping all sites achieve and maintain successful treatment practices. We are dedicated to developing new tools and trainings to provide superior information regarding the administration, maintenance, feedback, and data processing of the GAIN family of instruments.

Sites interested in using the GAIN, please contact:

GAIN Coordinating Center
Chestnut Health Systems
448 Wylie Drive
Normal, IL 61701
(309) 451-7900
GAINInfo@chestnut.org

1. Data Manager Role

Data Manager Description

This chapter includes recommendations from the Data Management Team regarding qualities to look for when designating a Data Manager, as well as an overview of the expectations and role of a Data Manager. The following responsibilities are for those that have chosen to receive GAIN edits feedback.

Data Manager Responsibilities

The Data Manager is responsible for ensuring that all GAIN assessments have been entered in GAIN ABS. In addition, the Data Manager is responsible for reconciling all data anomalies in GAIN ABS and communicating with clinicians and interviewers at the site to help improve the overall quality and validity of the data collected. Specifically the Data Manager ensures that complete and accurate data is entered into GAIN ABS each cycle to the GAIN Data Management team.

The Data Manager is also responsible for data integrity, by reviewing data quality and addressing and responding to any data anomalies identified by the GAIN Data Management Team (referred to as GAIN Edits). The Data Manager has access to all cases in the GAIN ABS web-based account for their agency and ensures that records have been entered into the GAIN ABS software so all records can be pulled by the GAIN Data Management Team.

The Data Manager acts as a liaison between the GAIN Data Management Team and all local staff who collect GAIN assessments, regarding data submissions and GAIN Edits feedback. After the Data Management Team reviews the data, written feedback, in the form of a GAIN Edits file, is sent to the site asking that any inconsistent, missing, or invalid responses be reviewed and modified in the assessments contained in the site's GAIN ABS account. Once the data record has been edited within GAIN ABS with the accurate responses, the Data Manager updates the GAIN Edits file to include site responses and returns the updated GAIN Edits file to the GAIN Data Management Team by the agreed upon due date.

Requirements for the Data Manager position:

- Must have good communication with clinical supervisors and the GAIN Data Management Team to discuss ongoing data inconsistencies that may represent a training issue for staff members administering the assessment.
- Must be detail-oriented and deadline-conscious.
- Must have access to staff members who administer GAIN assessments in order to gather information regarding data errors.

- Should have good working knowledge of Microsoft Excel, Internet browsers, and basic Microsoft applications and file management skills.

In addition, the amount of time required of the Data Manager depends on the number of staff members at their agency who administer the GAIN and the target number of clients in the project and may be impacted by local site configuration.

Data Manager Timeline

The Data Manager will ensure that all data collected through the end of the previous cycle are completed and ready to be processed by the GAIN Data Management Team by the close of business (COB) on the due date assigned by the GCC. Feedback is provided through GAIN Edits, and if requested, datasets are returned in SPSS format. Please allow at least the remainder of the submission cycle for processing and feedback.

GAIN Coordinating Center On-line Learning Center

Data Managers will need to understand when data submissions occur, and what the process of replying to GAIN Edits sent by the GAIN Data Management Team looks like. Therefore, every Data Manager, whether at grant or project start-up or due to Data Manager turnover, will be invited to go through training regarding the role and responsibilities of the Data Manager.

The trainings are available through an on-line training center and can thus be completed at the data managers' convenience. There are no additional costs or installations necessary to use the GCC On-line Learning Center course. Interactive technology enables the GAIN Data Management Team to provide all new Data Managers with a walk-through of each process for which a Data Manager will be responsible. To gain access to the on-line course, please contact the Data Team at DataSubmit@chestnut.org for further instructions. Data Managers will learn the basic skill set needed to complete their responsibilities, including:

- How to prepare GAIN data for export by the GAIN Data Management Team.
- A description of the data submission process.
- An explanation of how to use the GAIN Edits file and how to make changes in GAIN ABS using the feedback provided in the GAIN Edits file.
- How to update the GAIN Edits file to track changes made in GAIN ABS, and return that updated file to the GAIN Data Management Team.
- How to use the Characteristics and Outcomes Site Profiles report (*if purchased. The Site Profiles report is an additional data service option*).

Once the on-line course has been completed, a GAIN Data Management Team member will follow-up with each Data Manager to answer any site-specific questions and give additional information and tools to help the Data Manager be successful in their new role.

2. GAIN Data Preparation

All Data Managers are expected to prepare their agency's data to be pulled from their GAIN ABS account by the GAIN Data Management Team.

Data Collection Cycle

All GAIN data collected through the end of the previous cycle (yearly, quarterly, or monthly) should be entered into GAIN ABS, and the GAIN Data Management Team will pull all GAIN records from GAIN ABS agency accounts on the specified due date. The Data Managers are also required to post a GAIN Edit reply file Box by the same due date.

Following each data submission, the Data Manager will receive feedback from the GAIN Data Management Team. If requested, full datasets in SPSS format and Site Profiles reports[1] are returned on a quarterly or yearly basis. Please allow a month for processing and feedback.

GAIN Edit Reply submission guidelines

GAIN Edit reply files must be submitted by the deadline and include an e-mail notification to the GAIN Data Management Team (DataSubmit@chestnut.org). The GAIN Edit reply file must be submitted to the GAIN Data Management Team each cycle by the close of business (COB), 5:00 PM Central Time (CT), on the deadline specified by the Data Management Team.

COB on the due date means:

If the due date is a holiday: by 5:00 PM Central Time of the next closest business day, either before or after the due date. *The GAIN Data Management Team lead for your project will specify the due date prior to the data submission deadline.*

If the due date is a Saturday: by 5:00 PM Central Time the Friday *before* the due date.

If the due date is a Sunday: by 5:00 PM Central Time the Monday *after* the due date.

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[1] The Site Profiles report is created if contracted with Chestnut Health Systems.

Post GAIN Edit reply file to Box

Each agency will have a secure folder on Box.com. The GAIN Data Management team will send out email invitations to access the specific site folder. The Data Manager is responsible for creating an account using their email address the invitation was sent to and a password of his/her choice.

There are a few different ways to upload the GAIN Edits reply file to Box. The most straight-forward way that works with all browsers is simply using the "Upload" button and navigating to where the file is saved. (see figure 4.0).
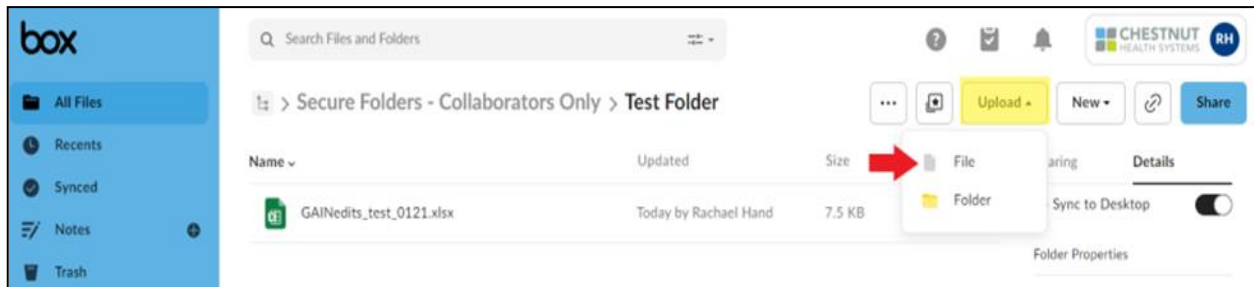

Figure 4.0

Naming conventions

The following file name is reserved for use by the GAIN Data Management Team when posting files (where "mmyy" is the month and year):

GAINEdits_#####_mmyy.xls (where ## is the site ID or site ID prefix)

It is the GAIN Data Management Team's responsibility to remove files that sites have posted, whereas sites are responsible for removing content that the GAIN Data Management Team has posted.

Data Management Materials

There are many resources available on the Data Management Material folder on box.com. This includes documents regarding how to submit data, how to fix GAIN edits, and demos on SPSS analytic data and Site Profiles.

These resources can be found at https://chestnut.box.com/v/DataManagementMaterials .

Data submission notification

Once the GAIN Edit reply file has been posted to Box, the GAIN Data Management Team must be notified of the submission. Notification takes place in the form of an e-mail to DataSubmit@chestnut.org. In order for the Data Management Team to respond quickly, it is important that the subject line of the e-mail contains a specific format of "Project, Site ID, Agency name, purpose description of the e-mail". For example, "DEMO 4 ABC Services – July GAIN Edit reply file posted."

The Data Manager should receive a confirmation of receipt of data submission from the GAIN Data Management Team within 48 hours. If the Data Manager does not receive a confirmation e-mail within 48 hours following data submission, they should contact the GAIN Data Management Team to ensure the data submission was received.

<u>**Using GAIN Edits**</u>

This chapter reviews the importance of and the processes involving GAIN Edits, for which the Data Manager will be responsible. GAIN Edits are the GAIN Data Management Team's way of providing feedback to the local sites. The edits are created by the GAIN Data Management Team and are a reflection of the quality of data collected and submitted by the Data Manager and the local site interviewers.

Data Managers are responsible for communicating with interviewers at their agency to reconcile all possible inconsistencies or missing values illustrated in the feedback or GAIN Edits that are created by the GAIN Data Management Team. GAIN Edits are an important part of the research project, and this continual feedback can help the local site bring to light any interviewer training needs as well as help maintain the validity and reliability of the data collected. Management of GAIN Edits can also help to ensure all narrative reports generated from the ABS software are accurate and any future research and grant writing is based on valid information.

Basics

Offered yearly, quarterly, or monthly, the GAIN Data Management Team reviews and processes each agency's data and compiles a GAIN Edits file. This GAIN Edits file is created by the GAIN Data Management team in a Microsoft Excel workbook, and is a detailed log of all inconsistencies, missing data, out-of-range responses, and possible errors found in GAIN data.

The GAIN Edits file also serves as a communication tool between the GAIN Data Management Team and the Data Manager. The GAIN edits for the Core Data Quality Report contain an accumulation of all outstanding edits in the data. Helpful notes are provided by the GAIN Data Management Team each cycle. The GAIN Edits for the Comprehensive Staff Training Report can be used to identify any training issues or interviewer drift, to ensure that all records collected and reports generated are as accurate as possible.

When all of the data from an agency has been reviewed, a GAIN Edits file is sent to the agency. The Data Manager will review the feedback with the interviewers and follow-up with clients and/or original interview documentation to reconcile all inconsistencies, missing data, and other edits. Once the Data Manager receives information from the interviewer, they will enter comments in the 'Site Responses' column, make the appropriate changes in GAIN ABS, and return the GAIN Edits file with site responses to the GAIN Data Management Team, preferably before or within the deadline for data pulling and GAIN Edit reply file submissions.

The GAIN Edits file…

- Allows the GAIN Data Management Team to clearly communicate inconsistent values, suggest changes, and ask questions about the sites' GAIN ABS data to ensure data is accurate and can be corrected if inconsistencies exist.

- Allows the local sites to inform the GAIN Data Management Team of their site's responses to data anomalies and allows the local sites to have the final decision regarding their data.

Structure of the GAIN Edits file

The Data Manager's GAIN Edits file contains edits for all of the GAIN instruments used at their agency. The GAIN Edits file is structured by tabs at the bottom of the file (figure 5.0), which organize the Edits by GAIN instrument.

Figure 5.0

The first tab in the file is the Edits Key tab, which is a quick reference for the information contained in the GAIN Edits file.

Each GAIN instrument tab within the GAIN Edits workbook contains column information for every line of edits:

Added – The date on which the GAIN Data Management Team found an issue in the data and added the new edit to the GAIN Edits file.

XSITE – The site's ID number.

XSITEa-The site's Local Program Code (*if using*)

XPID – The participant ID for the record being edited.

XOBS – The observation wave for the record in question for the GAIN-M90 or GAIN-Q3 instrument (*marked as "0" for GAIN-I and initial GAIN-Q3 assessments*).

XSID – The staff ID for the record.

XOBSDT – The date the GAIN interview was conducted for the record in question.

QVer – The version of the GAIN instrument for the record in question (e.g., 05.06.00, 05.07.00).

TxEpisd- The treatment episode of the GAIN assessment in question.

Variable – The variable/item name to identify which GAIN item the edit was created for.

From – The information that is currently recorded in GAIN ABS for this item.

To – The correction suggested by the GAIN Data Management Team. If the 'To' column is highlighted in yellow, the GAIN Data Management Team could not make any suggestions because of a lack of information. The site will need to determine an accurate response to each edit and make the appropriate changes in ABS.

Notes – A brief explanation from the GAIN Data Management Team as to why this edit has been created and why this particular response may need to be clarified with the client or changed by the local site.

Site Responses – The site must decide whether the GAIN Data Management Team's suggestion is correct or determine what other change may be needed to the variable in question. Then, the site must make the change in GAIN ABS and include a short comment on what was done to resolve each edit in this Site Responses column. This response from the site can be as simple as "OK" or "No—changed to *x* instead" or more detailed, if necessary.

Creating GAIN Edits

When the GAIN Data Management Team reviews each agency's data, each inconsistency, error, or other issue found in the data is added to the GAIN Edits file. Each GAIN Edit is created to give the agency an opportunity to address the potential inconsistency and, if possible, make a permanent change in GAIN ABS to correct the inconsistency or missing response. When a problem in the data is found, the GAIN Data Management Team may suggest viable responses. Please *note that this information can only be changed permanently in GAIN ABS by the agency itself, and cannot be changed permanently by the GAIN Data Management team.*

Most common GAIN Edits

Some of the common inconsistencies or errors the GAIN Data Management Team finds in the submitted GAIN assessments are listed below. This list is not complete; however, it can be used as a guide to help the Data Manager find and update the responses in GAIN ABS based on the GAIN Edits that were created.

Key variables reviewed each cycle

GAIN Edits are commonly created for certain questions in the GAIN. Listed in the following section are some variables checked by the GAIN Data Management Team and the most common inconsistencies found with each variable. Below are reasons why edits are created for each of these variables to enable the Data Manager to better understand the reason behind each GAIN Edit that is created. *Please note that several additional items are checked for accuracy each cycle by the GAIN Data Management team; the variables below are an example of some of the core items that are reviewed.*

GAIN variables

Variables in each GAIN instrument to review with the GAIN Edits file are:

XOBS – (*located in the assessment header*) – If the Observation Value is incorrect, a GAIN Edit will be created. In the initial GAIN assessment, the observation wave is always zero because those instruments are initial interviews and are therefore the starting point for all follow-up assessments. On the follow-up assessments, the observation wave should be the number of months since the initial assessment was conducted. (e.g. 3 = 3 months)

B1 – Gender should not be missing. The site should check to ensure accurate responses are recorded within the response set range (1-5, 99). If this variable is missing or a non-existent response choice is chosen, a GAIN Edit will be created asking the site to update the variable.

A1a/A1b – The start time should not be missing and should be recorded in standard time. If this response is missing or recorded in military time a GAIN Edit will be created.

Z1/Z1b – The end time should not be missing and should be recorded in standard time. If this response is missing or recorded in military time a GAIN Edit will be created.

Z1c – A GAIN Edit will be created if the number of breaks is missing or unusually high; typically there are not more than two or three breaks taken for each assessment, although seven to nine breaks may be valid on rare occasions. The GAIN Data Management Team will also create an edit if the total time is mistakenly entered in this field and the total number of breaks is entered in Z1d (total duration of assessment field).

Z1d – A GAIN Edit will be created if the total duration of the first session is recorded as 0 minutes, is missing, or appears to be inconsistent with the start time, end time, and total number of breaks taken. If there are no breaks recorded, the duration will be calculated from end time minus start time by the GAIN Data Management Team and a suggestion will be made in the GAIN Edits file.

E1 (GAIN-I, M90) – Housing status should have a valid response. Values of 99 (Any other housing situation) will be reviewed by the GAIN Data Management Team and all verbatim

responses that can be coded elsewhere in the E1 housing options will have a GAIN Edit created asking the site to confirm the code and change the response in ABS.

- Some examples of common verbatim responses for E1 include:
    - "Trailer" should be coded as 1 (A house, apartment or room you, your spouse…), 3 (A public housing or rent-subsidized apartment or house…), or 4 (A friend or relative's house, apartment or room), depending on whose name is on the deed or lease, and whether the trailer is rent-subsidized or public housing.
    - "A friend's house" should be coded 4 (A friend or relative's house, apartment or room).
    - "Residential treatment" should be coded 7 (Any kind of hospital, inpatient or residential facility…).

M1e/MH3c (GAIN-I, M90/GAIN-Q3) – If the participant reported having significant problems in the past 90 days with becoming distressed and upset when something reminded them of the past, then the number of times they were disturbed by memories of things from the past that they did, saw, or had happen to them must be greater than zero.

V7 (GAIN-I, M90) –This response should not be missing and values of 99 (Some other work situation) will be reviewed by the GAIN Data Management Team. Every verbatim response that can be more accurately coded in the V7 work or school situations will have a GAIN Edit asking the site to clarify and change the code in ABS.

- Some common verbatim responses include:
    - "Full-time work and part-time school" should be coded 1 (Working full-time)
    - "On summer break from school" should be coded 9 (In school or training, but not currently going to classes)
    - "Full-time school and full-time work or part-time school and part-time work" should be clarified and coded based on the activity the client is involved in most, and a staff note included to describe the situation.

XADMa1a-z – All fields in how the questions were administered should have a response of 1 (Yes) or 0 (No), and at least one of items XADMa1a-z must be 1 (Yes)**.** If all responses are missing or a record has all items coded 0 (No), GAIN Edits will be created for each item.

XADMa2a-z –All fields in mode of administration should have a response of 1 (Yes) or 0 (No), and at least one of items XADMa2a-z must be 1 (Yes)**.** If all responses are missing or a record has all items coded 0 (No), GAIN Edits will be created for each item.

Please reference the GAIN Walkthrough for more information on coding and clarifying items throughout the GAIN.

GAIN Edits reply file

Each agency will receive the GAIN Edits file per the designated timeframe (yearly, quarterly, monthly) from the GAIN Data Management Team and will be responsible for determining whether the GAIN Data Management Team's suggestions are correct or determine what changes are needed if the GAIN Data Management Team was unable to recommend a change. There are several effective ways to address GAIN Edits depending on how the site is set up. A few examples are:

- Distributing GAIN Edits to each GAIN interviewer who was responsible for collecting the GAIN assessment and having the interviewer determine the accurate response and report the accurate response to the Data Manager who will then make the change permanent within GAIN ABS.

- Having a GAIN Edits meeting in which all interviewers gather together to discuss all outstanding GAIN Edits for that cycle. During this meeting, interviewers will inform the Data Manager of correct responses or inform the Data Manager where to find the correct responses. This meeting can also serve to inform GAIN interviewers of possible areas of GAIN administration where additional training may be needed.

- If the site is doing GAIN interviews on paper and data entering the information into GAIN ABS separately, the Data Manager or another staff person can look through the paper versions of the GAIN to determine more accurate responses and make the changes permanent in the GAIN ABS software.

- *Note that any responses that need clarification should be addressed with the client to determine the most appropriate response before updating the information in GAIN ABS.*

After the site has made all possible corrections and changes within GAIN ABS, the Data Manager is responsible for noting in the Site Response column what changes were made in order to inform the GAIN Data Management Team that the GAIN Edits have been addressed. This can be noted in the Site Responses column as "Updated" or "Leave as is," and can be more detailed, if necessary.

The site should strive to address all GAIN Edits each cycle as all old and new outstanding edits are compiled and sent to the site. If a site does not address GAIN Edits, those outstanding GAIN Edits will be added to the new edits created the next time and continue to grow with each cycle until the site begins addressing the outstanding GAIN Edits.

Once the site has addressed all edits and the GAIN Edits file has been updated, the Data Manager needs to save the GAIN Edits file with a new name by inserting "**_reply**," as in "GAINedits_SiteID_mmyy_**reply**.xls." The Data Manager will then submit the GAIN Edits reply file via the site's Box folder and send an email to the Data Management Team at DataSubmit@chestnut.org by the assigned due date.

Once received, the GAIN Data Management Team will use the site's Site Responses in the GAIN Edits reply file to update the master list of GAIN Edits located at the GCC. All GAIN Edits with Site Responses that indicate the edit has been addressed will be marked as closed by the GAIN Data Management Team and the site will not receive those edits again. If the site is unable to find the missing value to resolve a GAIN Edit or is unable to clarify a more accurate response due to the client or site interviewer having left the project, the site should indicate that the information cannot be obtained and the GAIN Data Management Team will close those GAIN Edits as well.

Managing GAIN Edits

GAIN Edits can serve many purposes when used effectively to communicate many aspects of data validation to a site. The most prominent purpose of the GAIN Edits file is communicating to a local site all inconsistencies and errors found in the GAIN data that is submitted. In addition, the GAIN Edits file can be used as a training tool for interviewers at a site. Each GAIN Edit record is listed with a staff ID (XSID) to identify staff members who may need additional training on specific areas of GAIN administration. GAIN Edits allow the Data Manager, Local Trainer, clinicians, and clinical supervisors at the site to be aware of any additional training needs and move toward improving the data collected during interviews. Over time, this additional training can lead to a decrease in errors identified through the data processing by the GAIN Data Management Team, resulting in fewer GAIN Edits and more reliable and valid clinical reports and future research.

Bridging the gap between GAIN Local Trainers and Data Managers

Once certified as a GAIN Local Trainer[2], the Local Trainer is responsible for training their agency's staff as GAIN Site Interviewers[3]. The Local Trainer reviews recorded GAIN assessments from the Site Interviewer and writes feedback regarding items accurately administered and areas needing improvement. This feedback process continues until the Site Interviewer is recommended for GAIN Site Interviewer certification through Chestnut Health Systems.

A site's GAIN Local Trainer(s) should conduct ongoing quality assurance for all interviewers at the site to ensure the interviewers' administration techniques remain sharp, and provide any necessary training and/or updates regarding GAIN administration. Data Managers can work together with the Local Trainer(s) at their site to communicate common issues in the data, like a high number of edits for a certain item or group of items, common coding issues, a particular

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[2] A person certified by the GCC to conduct GAIN training and provide ongoing quality assurance for interviewers at a local site.
[3] A person trained by a Local Trainer and certified to conduct interviews using the GAIN.

staff member that appears to have a large number of edits, or any other issues the Local Trainer would find helpful.

Bottom line

Training affects data – The GAIN training a Site Interviewer receives from the Local Trainer affects the overall accuracy of the GAIN data collected in each GAIN interview.

Data affects training – GAIN Edits received from the GAIN Data Management Team can identify problems in administration and areas where more training may be needed.

To extend quality assurance and training, the GCC recommends that a site's Local Trainer and Data Manager work together in the following capacity:

- The Data Manager reviews the GAIN Edits file for trends (e.g., are errors identified by a specific interviewer? Are there common errors across all interviewers?) and reports these trends to the Local Trainer.

- The Local Trainer uses these trends to modify and improve the training and feedback provided to interviewers at the site.

- The Local Trainer and interviewer(s) discuss GAIN administration practices to improve the quality of information collected in each GAIN assessment.

- Regular staff meetings are held between the Local Trainer, Data Manager, and interviewers to discuss the site's data and administration quality assurance progress.

Note: Since the Local Trainer and Data Manager must work closely together, a site's Local Trainer may also serve as the Data Manager. In fact, many sites have had success with one person assuming both roles.

Data Manager's guide to identifying trends in GAIN Edits

Use the most recent GAIN Edits file that was sent by the GAIN Data Management Team to identify GAIN administration trends. Summarize the information and send it to the Local Trainers.

1. Review the Variables column.
   a. Are there any variables with numerous edits?
2. Review the Notes column.
   a. What kinds of errors are occurring?
   b. Are the errors related to documentation (e.g., typos) or GAIN administration (e.g., interviewer needs to clarify the client's vague response)?
3. Review the XSID (staff ID) column.
   a. Are the errors occurring for several interviewers at the site?
   b. Are the errors occurring for certain interviewers?
4. Create a summary note for the Local Trainers.
   a. Summarize the variable, type of error that is occurring, and whether it's a problem for several interviewers or particular interviewers.
5. Send the summary note to the Local Trainer(s).

Data Manager Technical Information and Support

When questions arise, determine the type of question: GAIN, ABS, SPSS, etc.

Check local sources first:

Manuals and instructions (GAIN, Data Manager Manual, GAIN Walkthrough etc.).

Then check existing resources:

Data Management Materials: https://chestnut.box.com/v/DataManagementMaterials

- Helpful Walkthroughs
- Data Manager reading
- Hand-outs for site interviewers

GAIN Coordinating Center Resources: **https://chestnut.box.com/v/GAINCCWeb**

- Instruments, instructions, FAQs, and Data Sharing Agreements
- Analytic Dataset Creation Syntax
- GAIN Help Contacts
- GAIN manuals and FAQs
- GAIN training information

For all other questions, please contact the appropriate team (see GAIN Help Contacts on next page).

GAIN HELP CONTACTS

GAIN products and services

For questions about purchasing GAIN products or services such as training, GAIN ABS, or licensing please contact us at GAINInfo@chestnut.org; Chestnut Health Systems, 448 Wylie Drive, Normal, IL 61761; phone: (309) 451-7900; fax: (309) 451-7762; or visit our website at http://www.gaincc.org.

Administration

For questions on administering the GAIN, specific GAIN items, or the GAIN certification process, contact our GAIN support team at GAINSupport@chestnut.org.

GAIN ABS

For questions related to navigating or using GAIN ABS, contact our GAIN ABS support team at ABSSupport@chestnut.org or (309) 451-7777.

Data

For questions about GAIN Edits or posting files to Box.com, contact our data management team at DataSubmit@chestnut.org.

Evaluation

For questions related to analysis using GAIN data files, SPSS analytic questions, or publications using GAIN data, contact our analytic team at GAINEval@chestnut.org.