

Drug Evaluation Network System (DENS) - Software Overview

The DENS Software Suite is an electronic ASI data collection system created with substance abuse treatment providers in mind. It automates administration of the ASI through an intuitive, time-saving interface used mainly by counselors at treatment facilities. The software takes very little time to learn and has a host of benefits unavailable to states and/or programs currently using paper and pencil instruments.

To schedule a DENS training or for more information on the DENS Software System, contact Meghan Love, Senior Program Manager, at mlove@tresearch.org.

Comprehensive intake assessment

The DENS Suite is a vehicle for the collection of the ASI, the most widely used substance abuse assessment instrument in the world. Mandated by numerous state governments as well as the Veteran's Administration, it is a standardized, semi-structured, multi-focused screening and assessment tool collecting client information in many different areas of the client's life (General Information, Medical, Employment, Alcohol/Drug, Legal, Family/Social, & Psychiatric). Every question on the ASI form is included in the software, which uses the same semi-structured format as the original ASI instrument to ensure questions are posed in the order intended. With the click of a button, interviewers can administer either the complete ASI interview or a shortened interview called the ASI-Lite. Less personally sensitive questions are asked toward the beginning, with more invasive items and sections appearing toward the end. This allows a counselor to build rapport before posing questions regarding intimate details to their clients.

Advanced functionality with little or no learning curve

The software was designed to be as easy to use as possible, especially for those with little or no previous experience with computers. All major functions are accessed through point-and-click button pressing, and all frequently used buttons have graphics to provide a visual aid. In addition, there are no menus, or "options" screens to configure. After a brief initial sign-in and registration process (completed by either TRI or site staff), every aspect of the DENS Suite is configured and available for immediate use by counselors, who can perform all software functions without the need to memorize commands or complex procedures. Onscreen help is present at all times (for both software functions and the ASI interview), and there is room within the title bar of the program to enter a telephone number users may call should they have a question or require further assistance. DENS software training is normally an inherent part of the TRI ASI training protocol. We have found consistently that even those with the most elementary level of computer literacy feel more comfortable using the DENS Suite once they are properly trained and have spent some time practicing using the software.

Coding, Crosschecks, & Defaults

The DENS Suite contains a number of embedded quality assurance measures to assure the data collected is as accurate as possible. Most visible among these is a series of Crosschecks and Defaults within the ASI portion of the software.

Sample Crosscheck:

Drug & Alcohol section - If a counselor codes a client with more days "drinking to intoxication" than the number of days coded for "drinking" at all, a pop-up message will appear warning the counselor that this situation is not possible, prompting them to recode either "days drinking" or "days drinking to intoxication". The computer will automatically send the counselor to the item to be recoded.

Sample Default:

Legal Section - If a counselor codes a client as not awaiting trial or sentencing for any criminal charges, the software will automatically code the next item (asking for the specific charge for which they are awaiting trial or sentencing) with a zero (0).

Crosschecks and Defaults guard against contradictory responses throughout the course of a client's intake assessment and ensure the counselor is coding consistently and according to standardized ASI coding conventions. In addition to these safeguards, each text field within the DENS Suite is set to accept only a particular set of characters as a response (i.e. a "how many days in the past 30" question will only accept a numerical answer between 0-30). This feature guards against typographical errors, and ensures the counselor is attuned to the specific information being requested in each field.

Hints & Comments

Each ASI item within the DENS software is displayed along with a "hint" at the bottom of the screen. These hints provide information on the intent of the item, any special coding rules, and recommended additional probes to provide clinicians with more detailed information. The content of the hint box changes each time the counselor clicks on a new item within the ASI, assuring that the display is always relevant to the question being asked.

Also included in the software is a text box for entering comments. This is available for each item on the ASI and allows a counselor to enter additional information and detail for each question. The content of the comments box refreshes as the counselor moves from item to item (similar to the hints), and all comments are automatically integrated in understandable text and logical sequence into the ASI Print-out and Narrative Summary alongside their related items. Finally, there is a place at the end of each ASI section for counselors to write additional comments or note information gathered beyond the standard ASI items.

1. Automated Reports (client-level & aggregate)

The DENS Suite produces two types of reports, Client Level and Aggregate reports. Client-level reports are summaries of an individual case, and are available in three formats - the ASI Print-Out, the ASI Narrative Report and the Treatment Care Plan Problem List. These are useful in treatment planning, creating a biopsychosocial report of the client's case, tracking changes in a client over time, etc. Aggregate reports summarize all of the cases on a particular computer, and are available from various perspectives (male compared to female clients, clients receiving welfare vs. those who are not, etc.) These are typically used for tracking trends in a client population, performing program evaluation, submitting responses to data requests, etc.

Client-level Reports

- **ASI Print-out**

This patient-level report lists all questions in the ASI along with the client's responses. Any comments entered by the counselor related to a specific question will appear in the print-out immediately following the response to the item.

- **ASI Narrative Summary**

The narrative is a ten (10) page report suitable for use as an intake summary. It converts the client's ASI responses into sentences and paragraphs, in effect "telling the story" of the client's intake interview. As with the ASI Print-out, any interviewer comments are automatically inserted within the narrative following the question item to which they refer. This allows the report to be customized for each client, allowing reporting of information observed but not necessarily collected through the ASI questions. Many facilities involved in the DENS research study use this stand-alone report as their biopsychosocial assessment.

- **Treatment Care Plan Problem List**

This is a list of potential problem statements derived from items on the ASI to which the client responds above or below a certain threshold. The statements include such details as "The client reports lifetime, regular use of heroin," or "The client is troubled by psychological or emotional problems and is interested in treatment." Included with this report is a blank treatment care plan template, used by counselors to construct a full treatment plan based on the provided problem list.

- **Treatment Care Planning (Coming Soon!)**

Although not yet available, a full treatment care planning module is currently under development. This module will include suggested problem statements, goals, objectives and interventions for every ASI section and question as well as space for counselors to enter problem statements of their own, objectives, goals, diagnosis codes, etc.

Aggregate Reports These reports summarize the entire database on a particular computer, providing an overall look at the clients at a particular facility. They compare each of the following pairs of groups to each other, listing averages for nearly all items included on the ASI.

- a. Male vs. Female Client data
- b. Clients entering treatment Last Year vs. This Year
- c. Welfare vs. Non-Welfare receiving clients
- d. Criminal Justice System (CJS) vs. Non-CJS involved clients

2. Additional Questions {for agencies (e.g. state or local governments) collecting data on their own SQL server from a group of distinct treatment programs }

In addition to providing an electronic means of collecting ASI data, the DENS Suite has the capability of incorporating additional questions of current interest. Up to five additional questions can be inserted into each section of the ASI (a total of 40 questions). With the proper training, inserting additional questions to the software is a relatively simple process for provider or state IT staff. The questions will be automatically uploaded into each remote site computer the next time those machines connect to the server to transmit ASI data. The result is a system allowing an agency to quickly gather new information from their sites without needing to budget large amounts of time and finances to roll out and collect data from an addendum to a pre-existing paper instrument. Examples of "additional questions" inserted for other studies includes collection of data on club drug use, OxyContin use, homelessness issues, increased use or psychiatric problems after 9/11, trauma issues, spirituality questions, etc.

3. Security

Several security features are built into the software to guard against client information being accessed by an unauthorized party. The entire client database is password protected, making it difficult for someone to simply copy the file from a facility computer and view it outside the DENS software environment. Within the software itself, there is a password protected login screen, preventing access by anyone other than users sanctioned by a treatment program. Further, when adding usernames to the software a system administrator can decide whether or not to grant new users "administrative access," which gives them permission to add and delete users themselves. This feature helps administrators limit access (if desired) to only those counselors who have passed the required ASI competency measures.

Another security feature embedded in the DENS software protects a treatment facility from transferring identifying information about their clients to TRI via modem or the internet. When data is exported, the software automatically strips the database of any and all client identifying information. This feature allows DENS to be in compliance with HIPAA requirements and protects the security of client information.

4. Training & Competency

It is important to ensure that counselors using the software within a treatment program are competent and comfortable with its operation before they attempt to utilize it during an assessment. To this end, there is a "practice" section within the software program which allows counselors to complete mock interviews just as they would if a client were present. The screens in this portion of the software function exactly the same as the normal ASI screens, but the data entered is only stored temporarily, and in a separate location than actual client data. Counselors can do as many practice ASIs as they want, and TRI offers a series of competency measures should an organization wish its staff to become officially certified in ASI administration.

5. Administrative Functions

In the administrative functions of the software, users will find all the tools necessary to maintain the software and manage their data. Here, counselors can backup their client database so no data is lost in the event of a computer malfunction. They can also use these screens to transmit their non-identifying data, or export it to a floppy disk for manual transmission. Aggregate reports are generated from the administrative area of the DENS Suite, and counselors can batch printed client narrative summaries from here as well. In addition to being able to print multiple narratives at once, counselors can use the batch printing feature to customize the order in which ASI sections appear within the narrative report. This feature is useful for facilities that report to a specific agency that only requests certain information about clients (i.e. only Legal & Alcohol/Drug data).

6. DENS Data Export Software

Available along with the DENS Suite intake software is a program called DENS Data, which allows a facility to export its client database to a statistical analysis package such as SPSS or SAS. The program can also convert a DENS database to Microsoft Excel spreadsheets. DENS Data is a useful utility for performing more advanced analyses on your site's data than the DENS Suite software is capable of completing on its own. Further, if you have more than one computer at your site running DENS, this data export utility offers a way of merging the data from several machines into one database, allowing you to get an overall picture of your site's clientele.