# Cúram 8.2

**Decision Assist Guide**

# Note

Before using this information and the product it supports, read the information in

# Edition

This edition applies to Cúram 8.2.

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# Chapter 1 Cúram Decision Assist overview

Decision Assist allows agencies to dynamically configure and run assessments. Cúram Decision Assist provides an alternative to the traditionally complex assessment model, and maintains transparency and consistency to support agencies' decision-making requirements.

As the name suggests, the Cúram Decision Assist application module supports the ability to make decisions based on setting up simple and administrative rules.

## 1.1 Understanding Decision Assist

A high level overview of the requirements for a decision assist solution. It describes the main requirements of a decision-making solution and maps Cúram Decision Assist to these requirements.

It also provides an overview of the Decision Assist administration and determination-based assessment components.

### Requirements of a decision-making solution

One of the main goals of a Cúram solution is to assist agencies in managing their products, many of which require the capture of large amounts of data concerning their clients, and the administration and execution of complex rule sets. There are however instances where the decision making of an agency does not involve large amounts of data or complex rule sets. Increasingly, agencies require these decision making processes to be quickly configured and executed. Another common requirement is the ability to track assessment outcomes over time, and to have visibility into the reasons for any changes.

All of this implies that a decision making solution is required which provides an alternative to the traditionally complex model, but which maintains the transparency and consistency to support agencies' decision making requirements. A simple decision making model and related rules should be available, in addition to, for example, complex rule sets available through Cúram Express Rule (CER) sets.

### Usage of Cúram Decision Assist

With the Cúram Decision Assist module, agencies can dynamically configure and run Decision Assist assessments. The assessments can range from medical assessments used to determine the severity of medical conditions that a client may suffer to a fraud, housing or child care assessment.

These assessments might be regarded as simple rule sets based on typical questions and answers for a client, rather than complex rule processing or business calculations. For example, a family risk assessment can be used to determine the risk level of abuse or neglect for a family. Agencies can use the outcome of this assessment to determine the best way to assist the family, first by

removing the members from harm, and then by helping them resume their normal lives again. Cúram Decision Assist provides the outcomes and then the agency decides what to do with these outcomes.

# *Cúram Decision Assist benefits*

Cúram Decision Assist provides a number of benefits. Rules-based assessments can be maintained and configured easily, which helps agencies to achieve efficiency and consistency across decision making.

## Ability to maintain simple rules

Decision Assist supports the configuration and execution of simple rules. Determination of these decisions are done by comparing the evidence that is collected against what is configured to arrive at an outcome, no calculations are required.

There are rules that are used to provide statistical outcomes such as a percentage, number or cost. These can be categorized as complex rules and are normally based on legislation. Not all rules used in the human services domain deal with such complex calculations. Often, the decision could be arrived at by answering a number of yes/no questions. The outcome might not be a statement of financial entitlement, but rather a statement of a client's situation, such as eligible or not eligible, safe, unsafe or conditionally safe. Decision Assist supports the maintenance of these simple rules.

## Ease of configuration

Decision Assist supports the configuration of rules that vary based on different parameters, which allows assessments to be run for clients of different ages and gender, without having to develop or customize the decision making process.

For example, the evidence that required to determine the eligibility of a client can vary based on the program for which he is being assessed. Age and gender of the client can also determine the type of evidence required and the rules that need to be applied to determine the assessment outcome.

## Efficiency and consistency in decision making

Decision making involves collection of evidence and then executing the rules to determine the outcomes. Decision Assist provides an easy way of answering questionnaires, reviewing the answers, making decisions and comparing the answers and decisions made over time. Answers given to questionnaires can be changed and new decisions can be made. The assessment life cycle supported by Decision Assist is easy to complete and repeat, if required.

Because the assessments are run based on configured data, consistency can be achieved in decision making. This is because the interpretation of evidence is not left to the user's discretion. The rules defined in the Administration apply to all assessments and hence uniform results are achieved independent of the user creating and maintaining the assessments.

## *Overview of Decision Assist configuration*

Determination configurations are created based on the programs that require client assessments and evaluations. One or more packages are defined for the determination configuration. Questionnaires are defined using the Cúram Intelligent Evidence Gathering (IEG) application and are related to relevant packages. Rules that are based on the questionnaires are defined in the Decision Matrix. Answer combinations and outcomes specific to the package characteristics, such as age and gender are also defined in the matrix.

Optional configurations include typical pictures for questionnaires and medical conditions for determination configurations. Typical pictures are used to define the typical answers that can be expected for a questionnaire. Medical conditions can have one or more ICD codes which are published by the World Health Organization. ICD Codes help standardizing the references to medical conditions in the application.

## *Overview of determination-based assessments*

Typically, standard assessment processing mimics real eligibility determination: it involves the capture of evidence and the execution of rules against that evidence to determine potential eligibility. While determination-based assessments are standard assessments in their own right, they do not mimic real eligibility determination. Questionnaires are used to collect evidence, and the decision matrix is executed to determine the outcome.

Determination-based assessment processing begins with asking the person being assessed relevant questions to be used in the evaluation. If necessary, questionnaires can also be completed by third parties. For example, medical assessments may require input from a person's doctor. When more than one answer exists for the same question, a consolidation process must take place, wherein the user selects an answer from a set of answers given by multiple sources. This selected answer is used when making a decision. This can be done manually by the user or automatically by the system.

Answers recorded for the questionnaires are passed into a decision matrix, and one or more outcomes are determined. For example, the Juvenile Detention screening assessment is used to determine the placement level for an arrested youth. Information is recorded about the youth, such as whether or not the youth has committed any crimes of violence, and whether the youth has active warrants. The answers are passed into the decision matrix, and an outcome of 'Level 1' is returned, requiring the most secure placement level.

When change of circumstance processing is supported, new determinations can be created for a determination-based assessment based on the change of circumstances. Each determination has an effective date from which the change of circumstances is relevant

# 1.2 Configuring Decision Assist

Configure the Decision Assist administration components to control how determination-based assessments behave.

## *Configuring determination settings*

The determination configuration controls the behavior of the determination-based assessment when it is run. The administration component contains all of the configurations that are required to run an actual determination.

Administrators can define the evidence that is required to run the assessment, how it is to be collected, and the logic to be used in the decision making process.

The following settings for a determination configuration control the behavior of determination-based assessments.

- Stand Alone indicator
- Multiple Sources indicator
- Automatic Consolidation indicator
- Support CoC indicator

## Configuring stand alone determinations

Use the Stand Alone indicator to identify assessments for which only a single determination type is required. Where this indicator is set, only a single determination configuration can be related to an assessment configuration.

When a user creates a determination-based assessment, the determination configuration is automatically used to create the determination.

Alternatively, multiple determination configurations can be associated with a Decision Assist assessment. In that case, the user should be able to select from the list of associated determination configurations. It is currently possible to associate multiple determination configurations to an assessment configuration, where the Stand Alone indicator is not set. However, this functionality is not yet available for a determination-based assessment.

## Recording answers from multiple sources and consolidation

Use the Multiple Sources indicator to identify assessments for which evidence from a third party may be required. When set to true, the Third Party Request functionality becomes available for a determination-based assessment.

Evidence for a determination-based assessment is collected by recording answers to questionnaires. These answers are usually collected from the client being assessed. The Multiple Sources indicator is available where agencies prefer to get a third party opinion on the problem that the client is being assessed for. This decision depends on the factor that the client is being assessed and/or the program. For example, a questionnaire that is used for determining the

severity of a medical condition can be sent to the doctor, to get an independent view of the situation.

After recording answers from a third party, a single answer value must be chosen for use in the decision making process. Use the Automatic Consolidation indicator to control whether this consolidation is done manually by the user, or by the system. Where the indicator is set, the system automatically picks up the latest answer provided. If the indicator is not set,users are required to select the answer to use in decision making.

## Configuring change of circumstances

Use the Support CoC indicator to support scenarios where a determination must be repeatable over time as client circumstances change.

Agencies normally require clients to notify them in case of any change of circumstance. This is relevant for assessments because the change may have an impact on the determination results. For example, a client may be receiving income support because his earnings were lower than the limit defined by the government. His salary and wages are then increased as a result of a promotion. The client has to inform the agency of this change of circumstance, so that the income support given to him can be re-evaluated. For each new determination, new evidence can be collected and new decisions can be made.

Not all determination types require a determination to be repeatable over time. In some cases, the agency may not wish to change the determination decision for an assessment, but prefer to create a new assessment and re-run the determination. For such determinations, the Support CoC indicator must not be set.

## *Configuring determination packages*

Questions and rules that are used in making decisions can vary based on parameters like the program for which the client is being assessed, or the age and gender of the client. Use determination packages to set up these rules and parameters.

A determination package can contain one or many questionnaires and decision matrices, specific to a program and/or gender and/or age of the client.

The system uses this configuration to select the questions to be asked for a determination-based assessment and the rules used to decide the outcome of the assessment. For example, a determination-based assessment for assessing the severity of a medical condition could have multiple determination packages, each one targeting a particular gender and age bracket, that is, a determination package for men aged 18-35, a determination package for women aged 18-35, a determination package for men aged 36-60. For more information about how the system picks up the relevant package, see .

## *Configuring questionnaires*

Decision Assist is integrated with intelligent evidence gathering (IEG) to create and maintain questionnaires. Use the IEG editor to configure questions and relevant answer data types.

For more information on integration with IEG, see Decision Assist Integration with Integrated Cases.

The administrator also can control the question text that is displayed to the user who is running the assessment. If the multiple sources configuration is set for the determination, relevant aliases need to be configured for the questions. For example, the question, `suicidal or risk of self harm`, might be presented to a third-party medical representative, such as a doctor. The wording of the question for the doctor would read, "`Based on your medical evaluation, is this person suicidal or at risk for self harm?`. This process is done through the third-party alias configuration in the IEG editor.

Some questionnaires might have questions that do not vary based on determination package parameters or can be used for more than one determination package configuration. Such questionnaires can be related to multiple determination packages. Questionnaires that are specific to a program or client characteristic can be related to a specific determination package.

*Table 1: Answer values for answer types*

| Answer Type | Answer Value |
|---|---|
| Boolean | Answers have a true or false, yes, or no value. |
| Code table | Answers are selected from a list of answer values. For example, a frequency code table has a list of values such as never, often, frequently, or always. |
| Numeric | Numeric answers can have minimum and maximum numeric values. |

## Configuring typical pictures

Typical pictures are a set of answers to questions that can be expected based on a previous determination outcome. Typical pictures are particularly relevant where multiple determination types exist in the same assessment, that is, a non-standalone determination.

For example, an asthma care questionnaire is used to ascertain the care needs of a person who has received an outcome of "severe" for an asthma medical determination. The asthma care questionnaire will ask the person a series of questions pertaining to his or her care needs due to the asthma condition. A person first answers the asthma needs questionnaire and an outcome of severe asthma is returned. The person then answers the asthma care questionnaire. The person's answers are compared with the typical answers for a severe asthma sufferer in order to observe similarities and differences.

If there is any change to the questions in the questionnaire, the system allows the user to run the 'Synchronize Typical Picture' functionality to resynchronize a typical picture with the questionnaire. For example, if a question has been removed from the questionnaire, resynchronizing the typical picture results in the removal of the question from the typical picture.

> **Important:** It is important to note that while typical pictures can be configured as part of Decision Assist Administration, the ability to compare typical answers to actual answers is not supported for determination-based assessments, because only determinations of the same type can be created for the assessment.

## Configuring presentation data

Use presentation data to decide whether a questionnaire is mandatory or recommended to be answered for a determination-based assessment.

When executing the decision matrix for a determination-based assessment, this configuration checks if questionnaires that are marked as mandatory were answered. A decision cannot be made if mandatory questionnaires were not answered.

These settings apply for standalone determinations as well as non standalone determinations. For non standalone determinations, the presentation of the questionnaire might depend on the outcome of the determination that was run previously. In some cases, the questionnaire may not be relevant for the determination, based on a decision made on the previous determination. The value is then set to Do Not Display.

## *Configuring outcomes*

Configure outcomes for a determination. Examples of outcomes include the level of benefit to be awarded, the level of abuse suffered by a child, or the risk of fraud for a particular client.

Outcomes are decision outputs for a determination. An outcome may be common across decision matrices and hence these are configured separate from decision matrices and then related. For example, 'High' might be suitable as an outcome for both a risk assessment and an assessment of a client's need for support. Therefore, the outcome of 'High' can be created by the administrator, and then added to the both risk determination decision matrix and the support matrix, along with any other matrices for which it is relevant.

## *Configuring decision matrices*

Use the Decision Matrix to define the logic (rules) in determining an assessment outcome. Decision matrices are configured for a determination package, that is, for a combination of product, gender and age.

More than one decision matrix can be configured for a package, based on the number of factors that are being assessed. An example is a client being assessed to determine the support required to return to work. The assessment must be done for education and job skills factors. When an assessment is run a decision will be generated for each factor (decision matrix type), for which answers have been provided.

The Decision Matrix has questions, corresponding answer values, outcomes, scores and answer combinations for the outcomes. Each of these elements is described in .

The decision matrix can be considered as a table which has rows and sub rows, columns and sub columns. Each row in the matrix represents a question; each sub row represents an answer; each column represents a potential outcome; each sub column represents a combination of answers that lead to an outcome.

A decision matrix can have a single outcome, multiple outcomes, and/or a rating based on a scoring mechanism for each answer. While the next chapter provides more detail on scoring and outcomes for a decision matrix, the following table provides a high level overview of the outcome and scoring options for decision matrices.

*Table 2: Outcome and scoring options*

| Option | Description |
|---|---|
| Cumulative | When selected, this means that a total score will be calculated when the answers are passed through the decision matrix. Scores must be assigned to answers specified in the decision matrix. For example, the decision matrix for a family risk assessment can be configured to produce a total score; the higher the score, the greater the risk. Cumulative scores can be mapped to outcomes outside the matrix. For example, the score range of 1-5 can be mapped to low risk, 6-10 to medium risk and 11-15 to high risk. |
| Multiple Outcomes | When selected, this means that the execution of the decision matrix can result in more than one outcome. For example, the assessment is configured to assess the support required for the head of the family in order to get back to work. The client is asked a series of questions in a number of areas relating to the needs of the family. The result of running the responses through the rules is that the client requires support in the areas of Child Support, Education and Training, and Transportation. These outcomes are returned from the matrix. |
| Scoring by Outcomes | This configuration allows a score to be returned for each outcome which is generated from a decision matrix. The score for the outcome is calculated by adding together all the scores for each answer which is included in the logic for the generation of that outcome. |

## Configuring Decision Assist assessments

After setting up the Decision Assist Administration components, you must relate the determination configuration to the assessment configuration.

The assessment configuration holds the data based on which assessments are created in the case management application. To create determination-based assessments, the type of the assessment must be set to Decision Assist. Assessment configurations of this type can be created from the Case section of the Administration application or in the Decision Assist component. You must set the homepage identifier to the relevant determination-based assessment home page. Out of the box, the home page identifier supported is DA_resolveAssessment.

Determination-based assessments can be created for an integrated case, product delivery case or an investigation case. To support this, you must relate the assessment configuration to all these case types. For example, when associated with an integrated case type, a determination-based assessment can be carried out at the integrated case level. Each of the household members in that integrated case can be assessed as individuals.

## Setting up determination configurations for an assessment configuration

Depending on the Stand Alone indicator value that is configured for a determination configuration, one or more determination configurations can be related to an assessment configuration.

For more information about the Stand Alone indicator, see .

More than one determination configuration must be set up for an assessment configuration to support the following scenarios:

- When the client has to be assessed for multiple problems. For example, a client may have an asthma medical condition as well as a sleeping disorder. Assessment of the impact of both these conditions on the client's lifestyle is carried out through two determinations, one for asthma and the other for sleeping disorder. This involves relating determinations configurations of the same type to an assessment.
- When the final decision of the assessment depends upon a sequence of determination steps. For example, for a disability benefit assessment, the level of disability has to be determined before deciding on the level of care required. So two determinations, disability and needs, are configured for the disability benefit assessment. In this case, determinations of two different types have to be related to the assessment.

While multiple determination configurations can be associated with an assessment configuration in the Decision Assist Administration component, this functionality is not yet supported in determination-based assessments. When a determination-based assessment is created for a client, only one determination can be run at a time, multiple determinations cannot be created. So in order to successfully run a determination-based assessment, only one determination configuration should be associated with each assessment configuration.

## *Version control support*

When running an assessment for a date in the past, the administration configurations that are valid on the assessment date are used. This way decisions that are made for clients on the same date are consistent. It also helps support agency policies in decision making that are effective from a specific date.

Versioning is provided for determination packages, questionnaires, decision matrices and typical pictures. Determination-based assessments can access and use released components while changes are being made to in edit versions.

To run an assessment, the administration components that are configured for the determination configuration must be released. The sub components must be released before releasing a component, that is, decision matrices and questionnaires must be released before a determination package can be released. The typical pictures must be released before releasing a questionnaire.

If any change is required to be made to the configuration, new versions can be created and edited. The data from the previous version is copied over and acts as a base for the next version.

## *Localization support*

Localization support is provided for questionnaires. By using the IEG editor, questionnaire scripts can be translated into different languages. This includes translations for question pages, question groups, and questions.

Support is also provided to translate the names of determination configurations, outcomes, and medical conditions. One of the benefits of localization is the ability to send communications in a person's preferred language. For example, a letter sent to a person being assessed for a particular medical condition can be written in that person's preferred language.

# 1.3 The Decision Matrix

The logic required to determine the determination decision is configured in the decision matrix. The decision matrix is set up within the determination package, as the logic to be configured and questionnaires may vary based on the package parameters.

## *Using the Decision Matrix*

The Decision Matrix is designed to handle simple rule sets. It is not designed to support complex rule sets and interpretation of data, such as calculations and data comparison.

The Decision Matrix:

- Allows Administrators to configure assessment rules using AND logic between answers across questions and OR logic for answers within a question.
- Is used to match a given set of answers to a configured answer combination and determine the outcome.
- Is used to evaluate Boolean, enumerated list type and integer answers.
- Is used to produce single or multiple outcomes and scores.

## *Elements of the Decision Matrix*

An overview of the elements of the Decision Matrix. The elements include assessment questions, answers, and outcomes for determination-based assessments.

## Questions

Questions are the means by which evidence is collected to make a decision for the determination-based assessment. Questions from IEG questionnaires that are configured for the determination package must be added to the matrix in order for the logic to be configured for the outcome.

Only questions that are relevant to the decision type should be added to the matrix. For example, if the decision to be made is on the severity of the Asthma medical condition, only those questions relating to Asthma medical condition are added to the matrix. These questions will appear as rows in the matrix. The determination decision is based on the answers given to the questions added to the matrix.

Questions from more than one IEG questionnaire can also be added to the matrix. This questionnaire must already has been released before the questions can be added to the matrix. The reason for this is that changes could have been made to the questionnaire, and therefore the decision matrix configuration may become invalid.

## Answers

The way the responses are captured can vary depending on the question that is being asked. Decision Assist supports the capture of Boolean, code table, and numeric answer types. The answer type is configured in intelligent evidence gathering (IEG) at the same time as the question.

When the questions are added to the matrix, subrows are created for each question that depend on the answer data type configured for the question:

- For integers, the user is presented with options to specify either a range or a fixed value.
- For enumerated lists, a menu with values from the code table that is selected in IEG is displayed for the user to choose
- For Boolean, `True` and `False` options are displayed.

Multiple answer values can be specified for the questions to cover different combinations of answers. For example, the answer True for a question can be mapped to one outcome and False can be mapped to another outcome. This mapping means that the question has two subrows, one for True and the other for False.

## Scores

Execution of the matrix when making a decision for a determination-based assessment can result in a score.

Whether or not a score is generated depends on the decision matrix configuration. For more information about matrix configuration, see .

There are two types of score configuration: cumulative score and a score per outcome. If either of the scoring options is set, a score column is added to the matrix. A score can be specified for each answer value added to the matrix.

## Answer priority

Agencies normally strive to produce a decision that is favorable to the client and the answers are assigned priorities based on this objective. Priorities can be assigned to the answers configured in the decision matrix.

Priority assignment is useful where answers from multiple sources are recorded in the determination-based assessment and there is a requirement to identify the highest priority answer given.

## Outcomes

Outcomes are program decisions defined by the agency, such as different levels of risk for a risk assessment carried out by child protective services agencies, or benefit rates for an income support program. In Decision Assist, outcomes are set up in the Administration application and can then be added to the matrix.

There are two ways in which outcomes can be determined and hence two configuration methods are required:

- By matching determination-based assessment answers with the answer combinations in the matrix.
- By comparing the determination-based assessment score with the scores configured for the outcomes.

To support the first method, the outcomes are added to the matrix directly along with answer combinations. For the second method, scores are assigned to answers in the matrix and outcomes are configured for different score ranges outside the matrix. More information on the method of determining outcomes for a determination-based assessment is available in section 5.4.

## Contradictions

Sometimes the answers recorded in the determination-based assessment may be contradictory in nature and an organization may wish to identify these contradictory answers when a determination decision is made. These combinations can be setup in the matrix under the contradiction column.

A suitable message to be returned when a contradiction combination is hit can also be set up in the matrix.

## *Maintaining decision matrices*

By using the decision matrix editor, the decision matrix information can be categorized into the matrix header data and the actual matrix data.

## Decision Matrix header

Details such as the matrix version, type, outcome (whether multiple outcomes are required from the assessment) and scoring options are specified in the decision matrix header details.

The configuration selections in the header determine how the matrix data must be set up. These details are carried over to the subsequent versions of the matrix, and can be modified. When the header is created, the matrix editor can be started.

## Creating a new Decision Matrix

When the matrix header is created and no actual matrix data is added, the matrix creation wizard can be started.

The wizard guides the user through four setup steps:

- **Questionnaires**
  This step lists the questionnaires configured for the determination package and can be used in this matrix
- **Questions**
  This step lists the questions from the questionnaires selected in the previous questionnaires step. The selected questions will be added to the matrix.
- **Outcomes**
  This step lists the outcomes available to the matrix. These will have been setup previously in the Administration application. The selected outcomes will be added to the matrix.
- **Option**
  This step lists the extra options, such as contradictions, priorities, and scores all of which can be added to the matrix.

## Decision Matrix editor

The decision matrix editor provides a user-friendly environment and interface for the users to create, edit and validate a decision matrix.

### *Decision Matrix editor layout*
The editor consists of the following components.

1. Main menu.
2. Filter matrix.
3. Validation panel.
4. Main matrix content.

*Figure 1: Decision Matrix editor layout*

### *Main menu*

The main menu panel is where all high level user actions are available.

The following actions can be performed using these Main Menu buttons:

- **Save**: Validates and saves the matrix. If there are validation errors, these will be shown in the validation panel and must be resolved before the matrix can be saved.
- **Validate**: This button checks that there are no errors within the matrix configuration. A list of validation errors will be shown in the validation panel, if there are invalid configurations in the matrix.

- **Export**: Exports the matrix into a comma-separated values (CSV) file to allow for formatting for ease of printing.
- **Question**: Adds additional questions to the matrix. All questions which are used in the decision making logic, or contribute a score, can be added. The type of answer for a question is defined when creating the questionnaire in the IEG editor. Currently the supported types are numeric, boolean and codetable.
- **Outcome**: Allows a user to select outcomes to add to the matrix. Only outcomes which can be generated based on a combination of answers should be added. If an outcome is generated based on the cumulative score produced from a matrix (for example, if the score is greater than 0 and less than 10 then the outcome is Low Risk), it should not be added to the matrix. Multiple outcomes can be added to a matrix.
- **Options**: There is a context menu available on this button which allows to add the following options to the matrix:

*Table 3: Options context menu items*

| Name | Description |
| --- | --- |
| Add Contradictions | Adds a Contradiction outcome to the matrix to the left of all the outcome columns. There can only be one contradiction column in the matrix, though it can contain multiple combinations. |
| Add Priority | Adds a column of text boxes to the right of the answers which are used to assign a numeric priority to each answer. |
| Add Score | Adds a column of text boxes to the right of the answers which are used to assign a numeric score to each answer. |

### Filter matrix

The filter matrix component contains a button with a context menu. The context menu includes a number of items that allow a user to filter the matrix by outcomes which includes the contradiction column.

*Table 4: Filter matrix context menu items*

| Name | Description |
| --- | --- |
| Show All | Allows a user to show the contradiction column and all other outcome columns if the menu item's checkbox is selected. Otherwise hides the contradiction and all the outcome columns from the view if unselected. |
| Contradictions | Allows a user to hide the contradiction column from view if the menu item's checkbox is unselected. Otherwise shows the contradiction column if selected. |
| Outcomes | In the filter matrix context menu for each outcome in the matrix there is a check box option available. This allows a user the option to hide each outcome columns from view if the menu item's checkbox is unselected. This is a usability feature to aid the navigation of the large matrixes. |

### *Validation panel*

As described earlier, the matrix can be validated to ensure configuration errors are not made, for example to ensure duplicate rules are not accidentally created. The validate action can be initiated by the user and/or performed on a save of the matrix.

After validating the matrix, any resulting errors will be presented to the user in the validation panel. The validation panel is located under the menu buttons in the editor, and above the main matrix content area.

When a validation is triggered by a user and there are errors to be resolved, the panel will list the errors. On hovering over an error message, the corresponding offending sub-columns or combinations will be highlighted, to direct the user to the error that needs to be resolved. Selecting the message will permanently highlight the offending columns until the matrix is re-validated. De-selecting the message will remove the highlight of the offending columns. The user is free however to minimize the validation panel and continue on with their work if they wish.

Once a save is initiated, the matrix will be revalidated, and if resolved the error will be removed from the validation list.

There are various validations which must be performed by the decision matrix before it can be saved successfully:

- There cannot be any duplicate answers of numeric type for the same question. By this we mean, entering the same value twice, entering a value which is within a range already entered, or having overlapping ranges.
- The same priority cannot be given to two answers for the same question.
- The selections made in two or more different contradiction and outcome combinations cannot be identical.
- For contradiction combinations, there must be selections made for at least two answers and these answers must be from different questions.

### *Main matrix content*

Overview of the main matrix content area. The area contains a table with a number of columns that are described.

## Questions

A context menu is available for the questions in this column.

*Table 5: Question Context Menu items*

| Name | Description |
|---|---|
| Add Answer | This menu item is available if the answer is numeric. This action allows a user to add an answer to a question. A 'Value' answer is added to a question by default. This supports logic such as "If Question 3 answer = 2". This can optionally be changed using the answer context menu to be a 'Min/Max' answer. This supports logic such as "If Question 4 answer is greater than 200 and less than 500". |
| | If the question is of boolean type, it contains two answers by default (true and false), and more answers cannot be added. In this case this menu item is disabled. |
| | This menu item is not available if the question is of type codetable. The maximum number of available answers are added to a question by default. |
| Restore All Answers | This menu item is available if the question is of type codetable. The maximum number of available answers are added to a question by default. For example, if the codetable contains seven values, a maximum of seven answers can be added to a question. These answers will be automatically populated when the question is added to the matrix. The user can then remove the answers they don't wish to include in the matrix logic. |
| | If a user chooses to delete some answers this menu item is enabled and allows a user to restore all the original answers. Otherwise this menu item is disabled if all the answers have been added. |
| Delete Question | Allows a user to delete the selected question from the matrix. The question and all its answers are removed from the matrix. |

## Answers

A context menu is available for the answers in this column.

*Table 6: Answer context menu items*

| Name | Description |
|---|---|
| Use Value | This menu item is available if the answer is numeric. Numeric answers support both a specific number answer and a range. This action changes range answer to use a specific number answer. This menu item is disabled if the answer already uses a specific number. |
| Use MinMax | This menu item is available if the answer is numeric. Numeric answers support both a specific number answer and a range. This action changes a specific number answer to use a range. This menu item is disabled if the answer already uses a range. |
| Delete Answer | Allows a user to delete the selected answer from a question. This is only allowed if there is more than one answer added for the question. Otherwise, it is disabled. This menu item is not available if the answer is of Boolean type. |

### Scores

The text boxes in this column allows a user to assign a score to each answer.

A context menu is available for the header of this column.

*Table 7: Scores context menu item*

| Name | Description |
|---|---|
| Delete Scores | Allows a user to delete the scores from all the answers. |

### Priorities

The text boxes in this column allows a user to assign a priority to each answer.

A context menu is available for the header of this column.

*Table 8: Priorities context menu item*

| Name | Description |
|---|---|
| Delete Priorities | Allows a user to delete the priorities from all the answers. |

### Contradictions and outcomes

The check boxes in this column allows a user to select contradiction and outcome combinations.

A context menu is available for the Contradictions/Outcome header:

*Table 9: Contradictions/outcome header context menu items*

| Name | Description |
|---|---|
| Show Related Questions | This action filters out all questions whose answers are not used in all combinations of the selected Contradiction/Outcome, this allows a user to easily see the logic for that rule or set of rules. The header will remain highlighted if this option is selected. |
| Show All Questions | This action removes the filter set by the menu item 'Show Related Questions' described above and will remove the highlight of the column header. |
| Add Combination | Allows a user to add a single combination column with empty check boxes to the outcome or contradiction. This represents a combination of answers which will generate that outcome. |
| Delete Contradictions | This menu item is available for the Contradictions column header only. Allows a user to delete the contradiction column and all combinations within the contradiction, of which there can be one or more. |
| Delete Outcome | This menu item is available for the Outcome column header only. Allows a user to delete the outcome column and all combinations within the outcome, of which there can be one or more. |

There is a context menu available for each Contradiction/Outcome Combination header:

*Table 10: Contradicions/Outcome Combination Header Context Menu items*

| Name | Description |
|---|---|
| Show Related Questions | This action filters out all questions whose answers are not used in the selected combination, this allows a user to easily see the logic for that rule or set of rules. The header will remain highlighted if this option is selected. |
| Show All Questions | This action removes the filter set by the menu item 'Show Related Questions' described above and will remove the highlight of the column header. |
| Copy | This action copies a single combination column into memory, which can later be pasted into any outcome or contradiction. If another combination has previously been copied, the newer copy overrides the older copy. |
| Insert Before | This action pastes a previously copied combination before the selected combination of the outcome or contradiction. If no combination has been copied previously, this action is disabled. |
| Insert After | This action pastes a previously copied combination after the selected combination of the outcome or contradiction. If no combination has been copied previously, this action is disabled. |
| Delete | This action deletes a single combination column from within an outcome or contradiction. If there is only one combination in the outcome or combination, removing the combination will remove the outcome or contradiction. |
| Set Message | This menu item is available for the Contradiction Combination header. Each contradiction combination can have a set of localized messages assigned to it which explain the reason for the contradiction. These reasons are presented to the user when a decision is made for the assessment. This action displays the Edit Messages Pop-up window which allows a user to set localized messages for the defined languages. |

## *Cloning decision matrices*

Decision matrices can be cloned to be used within the same determination package or for a different determination package. For example, the matrix data for the age range 10 to 25 could be quite similar to the one configured for the age range 26 to 40.

Instead of setting up the matrix from scratch, the decision matrix that is configured for the 10 to 25 age range package can be cloned over to the 26 to 40 age range package. The cloned matrix can be modified to reflect the differences between the logic used for the two age ranges.

# 1.4 Determination-based assessment lifecycle

Determination-based assessments are assessments run to make decisions on an organization's clients using the rules configured in the Decision Assist administration application. The lifecycle

of determination-based assessments includes answering questions to making decisions and completing a determination.

# Creating a determination-based assessment

A determination-based assessment can be created for an integrated case, a product delivery case or an investigation case. As mentioned previously, the Decision Assist assessment configuration must be related to the relevant case types in the Administration application.

When these relationships are created, the assessment configurations are available for selection from the relevant cases. When creating a new assessment, any of the case members can be selected to be the subject of the assessment. The assessment is created effective the date specified by the user.

The assessment and determinations created depend on the configuration in the administration application. The assessment and corresponding determination are created based on the assessment configuration selected. Currently only stand-alone determination configurations are supported. So a single determination is created, with the same effective date as that specified for the assessment.

## Selecting the determination package

A determination package holds the questionnaires and decision making logic for the assessment. To make decisions, the system must select the determination package most suited to meet the needs of the client being assessed, based on the product, age, and gender criteria configured on the determination packages.

Where an assessment has different rules or logic specific to the client's age, gender and agency program, an assessment can have several determination packages.

The process of choosing the determination package for a client begins with the system retrieving case and participant information for the client. The system then compares the participant and case information to the information contained within the different determination packages set up for the determination configuration, and all determination packages for the effective date of the assessment are retrieved. Next, the system selects the determination package for which the configuration best matches the client being assessed. This process differs slightly for different case types:

- For assessments run for product delivery cases, the system will select any determination packages configured for that product, and then within that selection, the system selects the determination package for which the configuration best matches the client being assessed. So a package for which the age and gender specified matches those of the client will be selected before a package for which only the age matches. This "best matching" approach is also followed where none of the packages have a matching product.
- For assessments run for integrated or investigation cases, determination packages which have a product configured are disregarded. The selection of the package follows the same approach as described above, with the package which matches on the highest number of criteria being the one which is selected. Where no criteria are configured, this means there will only be a single determination package configured for the determination, and that package will be selected by default.

## *Answering questionnaires*

As described in **Questionnaires**, questionnaires are used to gather evidence that is required to run a determination-based assessment. Answers must be recorded for the questions to run the decision matrix. Sources for answers can originate from the client or a third party.

The question scripts are created by using intelligent evidence gathering (IEG). With IEG, information is gathered interactively by displaying a script of questions that a user can provide answers to. Clicking **Exit** or **Next** saves the answers that are recorded in the questionnaire. A user can continue to return to a questionnaire and change the answers at any time. The most current released versions of the questionnaires valid on the assessment effective date are used.

## Configuring questionnaires

Decision Assist is integrated with intelligent evidence gathering (IEG) to create and maintain questionnaires. Use the IEG editor to configure questions and relevant answer data types.

For more information on integration with IEG, see [Decision Assist Integration with Integrated Cases](#).

The administrator also can control the question text that is displayed to the user who is running the assessment. If the multiple sources configuration is set for the determination, relevant aliases need to be configured for the questions. For example, the question, `suicidal or risk of self harm`, might be presented to a third-party medical representative, such as a doctor. The wording of the question for the doctor would read, `"Based on your medical evaluation, is this person suicidal or at risk for self harm?`. This process is done through the third-party alias configuration in the IEG editor.

Some questionnaires might have questions that do not vary based on determination package parameters or can be used for more than one determination package configuration. Such questionnaires can be related to multiple determination packages. Questionnaires that are specific to a program or client characteristic can be related to a specific determination package.

*Table 11: Answer values for answer types*

| Answer Type | Answer Value |
|---|---|
| Boolean | Answers have a true or false, yes, or no value. |
| Code table | Answers are selected from a list of answer values. For example, a frequency code table has a list of values such as never, often, frequently, or always. |
| Numeric | Numeric answers can have minimum and maximum numeric values. |

# Recording third-party answers

As mentioned in **Recording answers from multiple sources and consolidation**, a determination configuration can be set to collect evidence from multiple sources. To support this configuration, question aliases can be configured in intelligent evidence gathering (IEG).

Third-party requests can be created by the user, by selecting a list of questions from the questionnaires. Questions for which answers are not recorded, in addition to those questions that require a second opinion, can be selected to be sent to the third party.

After the questions for which third-party opinions are required are selected, the third-party request is recorded on the system with a status of `Not Sent`. When the user selects to send the third-party request, the status changes to `Sent`, though it needs to be noted that currently no communication is generated automatically by the system. When the responses from the third party are received, the user can record the answers against the questions. Answers can be recorded from more than one third party for a question.

# Consolidating answers

As described in **Recording third-party answers**, answers from multiple sources can be recorded for questionnaires. Before decisions are made, a suitable answer value needs to be selected by the user for those questions that have multiple answers. This answer value is required because a single answer must be compared with that value that is configured in the decision matrix. This process is referred to as consolidation.

Consolidation can either occur automatically, where the most current answers replace previous ones, or manually, where a system user selects the most appropriate answer. As mentioned in **Recording answers from multiple sources and consolidation**, whether the questionnaires are consolidated automatically or manually is configured in the determination configuration.

Questionnaire information for a determination includes the consolidation status. This status is marked as `No` before consolidation, as `Partially` when some but not all answers are consolidated, and `Fully` when all answers are consolidated. All the questionnaires need to be consolidated fully before a decision is made.

### Recording third-party answers

## Making decisions

After collecting evidence through questionnaires, the outcome of the determination is determined. This is done by executing the decision matrix. The determination answers are compared with the answers configured in the matrix and the matching outcomes and scores are returned.

Sometimes the answers given to the questionnaires might be contradictory. In such cases, the reason for the contradiction is returned instead of an outcome or score.

Decisions can be made multiple times and each time a decision is made, the previous decision is superseded. This is useful in scenarios where the user finds that there is a change in evidence or when new answers have been received from a third party.

The user can continue to make decisions for the determination until it is completed, that is, the status is changed to 'Completed'. Once the determination is completed, then for any change in evidence, a change of circumstance has to be recorded, if the 'Support CoC' indicator has been set for the determination configuration.

## Canceling determination-based assessments

Typically, determination-based assessments are canceled when created in error, or when an error is introduced. It is not possible to cancel a completed determination-based assessment, as further processing might have happened based on the completion of the assessment, for example the award of a benefit.

When canceling a determination-based assessment, all its decisions are also canceled.

## Completing determination-based assessments

When a decision for an assessment is made, an organization might want to complete the assessment, to indicate that the determination is final and the decision can be used in further processing, such as making benefit payments. To facilitate this, determination-based assessments can be marked as complete in Decision Assist.

At least one decision must exist in order to mark a determination as complete. Completed determination-based assessments cannot be updated. However, change of circumstance processing allows new determinations to be made over time for the same determination-based assessment.

## Cloning determination-based assessments

Some programs might require periodic reviews to be carried out on the benefits being given to the client. This is supported in Decision Assist by assessment cloning.

For example, James Smith is availing of disability benefit for the Asthma medical condition and is currently under medication. His condition has to be reviewed every 6 months to see if there is any improvement or deterioration, which may lead to a change in benefit. So a determination-

based assessment has to be created after 6 months, followed by collection of evidence and decision making. In majority of the scenarios, the change in client condition will not be much. So it is easier for users to take the previous assessment as the base for the new assessment and make relevant updates.

A determination-based assessment can be cloned at any stage in its lifecycle. Note, however, that the determination configuration associated with the determination-based assessment must be active in order for a clone to be created. This is to make sure that the administration configuration is still valid and can be used for the new assessment. All questions, answers, primary client details, and determinations are copied over to the new determination-based assessment.

## *Changing and comparing decisions over time*

Decisions made for an assessment could change because of a change of circumstance or because new evidence was received. Equally, an organization may wish to track a client's progress over time, to see if the client's needs are changing, or if the organization's interventions are effective.

Based on this information, corrective actions can be taken. For example, it is important to monitor a client's risk of abuse or neglect over time to ensure that the risk does not progress from low to medium or high.

Determination-based assessments support making decisions more than once and also comparison of those decisions. Two decisions can be selected, which can be from within the same determination, or across determinations for a client. The information that can be compared includes decision outcomes and scores, the questions asked, and the answers provided.

# 1.5 Configuring sample assessments

An overview of how to configure two sample assessments: Asthma and Juvenile Detention.

## *Asthma assessment overview*

An overview of a sample Asthma assessment that you can configure in Decision Assist Administration.

### Assessment objective

The assessment gathers information about Asthma, a specific medical condition for a client, to attempt to determine the severity of that condition. That outcome can be used outside of Decision Assist in deciding on a client's eligibility for disability benefits.

This example of a medical assessment uses a single determination type, and is a standalone assessment. Medical assessments were originally conceived as holding multiple determination types in Decision Assist. Each condition to be assessed was set up as a different determination configuration, and all of these determination configurations are associated to a single assessment. Although the Administration component supports this, the Determination Based Assessment

component does not (see ).

## Assessment outcomes

The outcome of the assessment is the severity of the condition Asthma. It can be Mild, Moderate, or Severe, and these are generated by various combinations of answers.

An outcome may not always be obtained, dependent on the answers given. Where an outcome can't be produced, one of the following result types is produced.

- **Outcome Not Determined**
  Where is insufficient information to reach an outcome, that is, an outcome combination has not been hit.
- **Contradiction**
  Where some of the answers contradict one another. This result type can also be configured to return a message to the user advising them which answers are contradictory and why.

## Questions

There is one questionnaire for Asthma, which includes three questions. The questions are non-mandatory and answers can be sought from a number of sources. If answers obtained from the claimant are insufficient to reach an outcome, questions not answered can be submitted to a third party, for example, a doctor.

The questionnaire contains the following questions.

Q1 - What step of the treatment plan is the claimant on?

Q2 - What is the claimants peak flow/FEV1 reading?

Q3 - What are the effects of the symptoms and signs?

The user must manually select which source of evidence they wish to use to make a decision, that is, the doctor's answer or that of the claimant. This is different from automatic consolidation, where the latest answers received are always accepted.

While the same questions are asked of both male and female claimants, the answers are interpreted differently. For example, a Peak Flow of 100 litres/min might be small for a male, but average for a female.

## *Configuring the Asthma assessment*

You must complete five steps to configure a new assessment in Decision Assist.

1. Create an assessment and link it to a case type.
2. Create a determination configuration and associate it with the assessment.
3. Create one or more determination packages.
4. Create questionnaires.
5. Create rules (in the Decision Matrix).

## Configuring the assessment

A Decision Assist assessment is a type of application assessment. As such, the assessment name must be added to the Assessment Name code table in system administration.

Complete the steps to the add the assessment name.

1.  Log in as sysadmin.
2.  Go to *Application Data*.
3.  Select the AssessmentName code table.
4.  Select to add a *New item* to the code table.

    - Code AST-01
    - Description Asthma Assessment
    - Selectable indicator set

5.  Publish the code table changes.

    Next, the Decision Assist assessment must be created.

6.  Log in as Admin.
7.  Go to the Decision Assist shortcuts panel section.
8.  Select *New Assessment...* on the Assessments tab.
9.  Enter the assessment details.

    - Select the assessment name that you created.
    - Select type Decision Assist.
    - Enter Home page Identifier as DA_resolveAssessment.

    To make the assessment available to be run from an integrated or product delivery case, the new assessment must be associated with the case type. In this case we are associating with the Assistance integrated case. We can equally associate it with a benefit product in the same way.

10. Select *Case* from the shortcuts panel.
11. Select *Integrated Cases*.
12. Add the assessment to the Assistance integrated case type and ensure that the period of association is correct.

## Creating the determination configuration and determination packages

A determination configuration can be created from the Home Page of Decision Assist. This is an assessment with a single type of determination within it (Medical), which may need to be reassessed following changes of circumstance over time. Therefore the Standalone and Allow Change of Circumstances indicators should be set.

Information may come from a number of sources, therefore the multiple sources indicator is set. The caseworker selects which source of answer to use (Client or Third Party) to make a decision, so the Automatic Consolidation indicator should not be set.

1.  From the Decision Assist shortcuts panel section, select *New Determination Configuration*
2.  Enter the configuration details:

- Name Asthma Adult
- Type Medical
- Multiple Sources indicator set
- Standalone indicator set
- Support CoC Processing set

As mentioned previously, the answers to the questions vary depending on gender. One of the questions asks about Peak Flow, and this is assessed differently for males and females due to differences in lung capacity. Therefore two Determination Packages are required. These are differentiated by gender, and so this criteria is added when setting the determination packages up; one Determination Package with gender = Male and the other with gender = Female. The appropriate Package will be picked up at runtime based on the claimant's gender.

3. From within the determination configuration, select *New Determination Package*

- Name Asthma Female
- Gender Female

4. Repeat for the Male determination package

We are now ready to add questionnaires and rules to the packages.

## Configuring questionnaires

The method of gathering evidence in Decision Assist is through questionnaires. For our assessment, there are only three questions, which are used in both determination packages. Therefore only one questionnaire is required.

The questionnaire is associated with both packages and is a single IEG script.

To add the questionnaire, follow the following steps.

1. From within a determination package, select *New Questionnaire*.

- Name Asthma Adult
- Type Medical

2. Select *Edit Questions* from the Actions dropdown.
3. Create the questionnaire in the IEG Editor (see IEG documentation for guidance).
4. On exiting and refreshing the Questionnaire page, the questions will be visible.
5. Select *Release*; this makes the questionnaire available to be added to a Decision matrix.

## Configuring decision matrices

As different rules will be used for the male and female claimants, two different matrices are required in the two determination packages. They are both configured in the same way.

A single outcome is produced from this assessment from the combination of the answers given. Therefore the Multiple Outcomes Indicator is not set. No scoring is required in this Assessment therefore the Cumulative Score and Score By Outcome indicators are not set.

Contradictions can be produced if the combination of answers is unlikely or inconsistent; in this case, it is inconsistent that a client is engaged on a late stage of a treatment plan when he has a

maximum lung capacity (peak flow reading). Therefore contradiction combinations are required in the matrix.

Outcomes would then be added to the matrix in order of priority. For this medical assessment, Severe has the greatest priority, and this would be added first followed by Moderate then Mild.

Finally, the rules which generate the outcomes are added in the form of combinations within each outcome.

1. From within the determination package, select *New Decision Matrix*.
2. Enter matrix details.

   - Name Asthma Female
   - Type Medical
   - No indicators set

3. Select the matrix from within the Decision Matrices cluster.
4. From the decision matrix page, select *Edit Matrix Data*.

   The decision matrix editor is now launched.

5. Select the *Question* action button.
6. Select the Asthma Adult questionnaire from the drop down list.
7. Select all questions and add them to the matrix. The questions with numeric responses (questions 1 and 2) are initially added with a single answer. The question with a codetable answer (question 3) is added with all three possible answers.
8. For each possible answer to a question which will be used by the logic, left click the row heading and select *Add Answer*. Where the answer data type is a number, either enter a value or a range, using the answer context menu to select either Use Min/Max or Use Value. Add as many ranges as required by the assessment rules. For example, for question 2:

   - First answer, select Use Min/Max, enter 0 to 249.
   - Add Answer, select Use Min/Max, enter 250 to 449.
   - Add Answer, select Use Min/Max, enter 450 as the lower bound; leave the upper bound blank to indicate "anything above 450".

9. Select *Add Contradictions*.
10. For each sub column, select the combination of answers that should lead to the contradiction outcome, for example:

    - IF on step 5 of the treatment plan, AND peak flow / FEV reading > 450.

11. Add further combinations as required by left clicking the column context menu and selecting *Add Combination*.
12. Select *Outcomes*, and select the outcomes of Severe, Moderate and Mild to be added to the matrix.
13. For each outcome, add combinations for each rule by selecting *Add Combination* from the column context menu. Select answer combinations using AND and OR logic as required, for example:

    - IF symptoms occur daily, major effect AND on step 3 or 4 of treatment plan OR on step 5 of treatment plan => Severe outcome.

14. Save the matrix, using the Save action button, ensuring no validation errors are present, and exit the matrix editor.

15. From the decision matrix home page, select *Release*.
16. The determination package can now be released; from the determination package home page, select *Release*.

## Associating the determination configuration with the assessment

The determination configuration must be associated with the assessment to make it available to in the Determination Based Assessment component.

1. From the Assessments tab, expand the *Asthma Assessment row item*.
2. Select *New Determination Configuration*.
3. Add the Asthma Adult configuration to the assessment.

The Asthma assessment is now ready to be run by a user.

## *Juvenile Detention screening assessment overview*

An overview of a sample Juvenile Detention screening assessment that you can configure in Decision Assist Administration.

### Assessment objective and outcomes

The objective of the Juvenile Detention assessment is to gather information about an arrested youth, and helps decide on a level of placement for that youth.

The outcome of the assessment is the placement level.

There are five placement levels that a youth can be placed in:

• Level 1 - Secure Detention
• Level 2 - Staff Secure
• Level 3 - Residential/Shelter Care
• Level 4 - Home Detention Services
• Level 5 - Release

### Questions

There is one questionnaire with 22 questions in 7 question categories. The following categories are shown.

• Mandatory Holds (questions 1 to 3)
• Serious Delinquent (questions 4 to 8)
• Risk of Self Harm (questions 9 to 12)
• Public Safety Risk (questions 13 to 16)
• Family or Community Resources (questions 17 to 20)
• Responsible Adult (question 21)
• Felony Charge (question 22)

Not all question groups are asked for all youths. Whether a group is asked depends on positive responses to questions in previous groups.

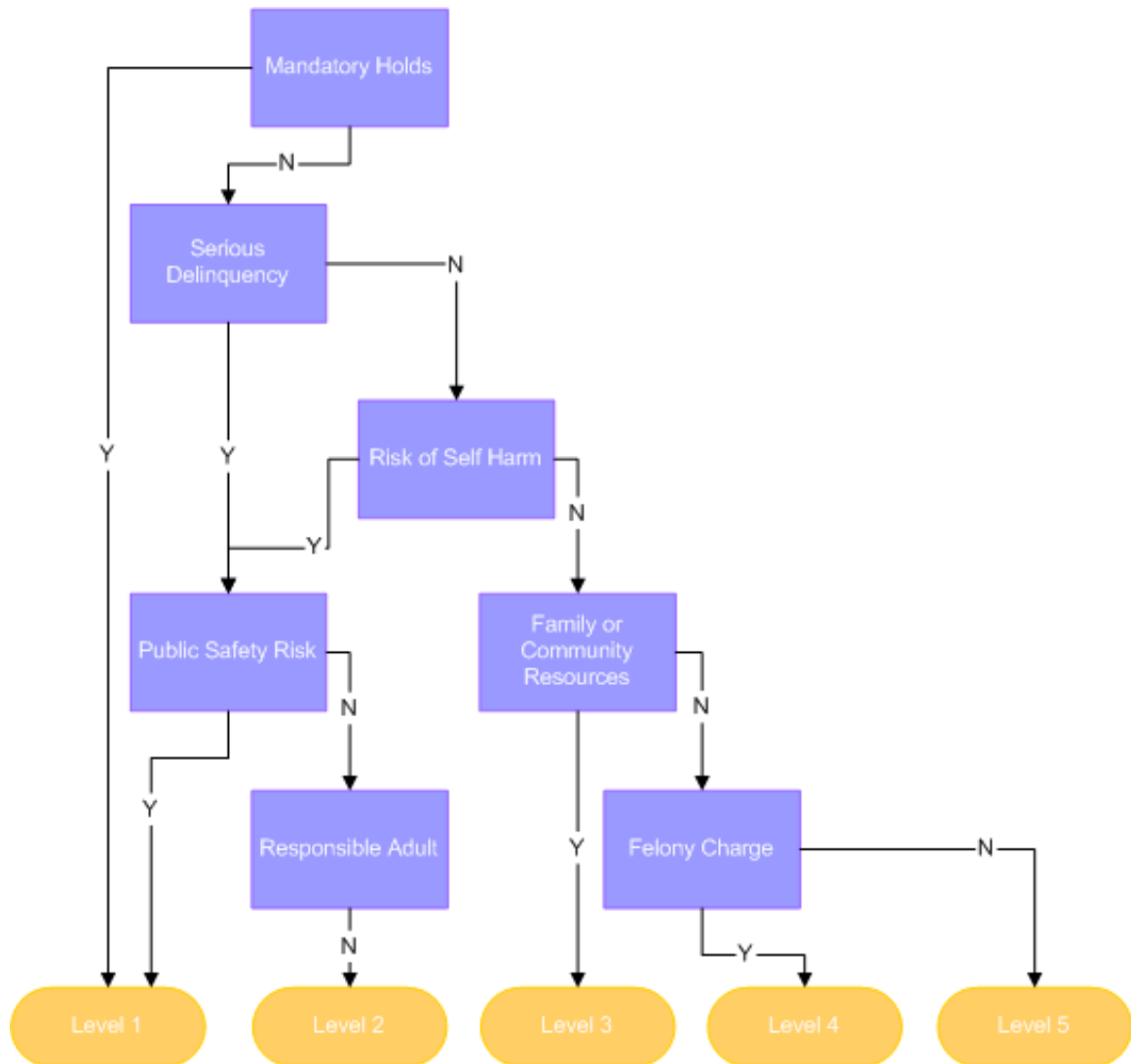The flowchart illustrates the logic.



*Figure 2: Questions flowchart*

From the flowchart, we can derive the rules for the assessment.

- If answer 1 or 2 or 3 is not 'Yes'
- AND answer 4 or 5 or 6 or 7 or 8 is 'Yes'
- AND none of 13 or 14 or 15 or 16 is 'Yes'
- AND answer 21 is not 'Yes'
- Then result is Level 2

We will see later that for this assessment, it isn't necessary to set up all this logic, due to the ability to direct a user through an IEG script using preconditions.

## *Configuring the Juvenile Detention screening assessment*

You must complete five steps to configure a new assessment in Decision Assist.

1. Create an assessment and link it to a case type.
2. Create a determination configuration and associate it with the assessment.
3. Create one or more determination packages.
4. Create questionnaires.
5. Create rules (in the Decision Matrix).

### Configuring the assessment

A Decision Assist assessment is a type of application assessment. As such, the assessment name must be added to the Assessment Name code table in System Administration.

1. Log in as sysadmin.
2. Got to *Application Data*.
3. Select the AssessmentName code table.
4. Add a New item for the new assessment.

   - Code JUVDET
   - Description Juvenile Detention
   - Selectable indicator set
5. Publish the code table changes.

   Next, the Decision Assist assessment must be created.
6. Log in as Admin.
7. Go to Decision Assist shortcuts section panel
8. Select *New Assessment...* on the Assessments tab
9. Enter the assessment details.

   - Select the assessment name created above.
   - Select type Decision Assist.
   - Enter Home page Identifier as DA_resolve Assessment.

   To make the assessment available to be run from an integrated or product delivery case, the new assessment must be associated with the case type. In this case we are associating with the Assistance integrated case. We can equally associate it with a benefit product in the same way.
10. Select *Case* section from the shortcuts panel.
11. Select *Integrated Cases*shortcuts link.
12. Add the assessment to the Assistance integrated case type, ensuring that the period of association is correct.

## Creating the determination configuration and determination packages

A determination configuration can be created from the Decision Assist home page.

The Standalone Assessment Indicator is set when creating the determination configuration. This assessment has a single determination type of 'Screening' within it. The assessment does not allow change of circumstances as it is a point-in-time assessment, therefore the Allow CoC Processing Indicator is not set.

Information will always come from the caseworker only, therefore the multiple sources indicator and Automatic Consolidation should not be set. There are no different rules depending on who is being assessed, hence only one Determination Package is required, and no criteria (age, gender, and so on) need to be added when creating that Determination Package.

1. From the Decision Assist shortcuts panel section, select *New Determination Configuration*.
2. Enter the configuration details:

   - Name Juvenile Detention
   - Type Screening
   - Multiple Sources indicator not set
   - Standalone indicator set
   - Support CoC Processing not set

   There are no different rules or questions in use for different youths. In this case, a single determination package is used.
3. From within the determination configuration, select *New Determination Package*

   - Name Juvenile Detention

We are now ready to add questionnaires and rules to the package.

## Configuring questionnaires

In Decision Assist, questions can be asked in a single IEG script or split into a number of questionnaires. For this example, we have created a single questionnaire with 7 question groups, as this fits logically with the question groups.

We could also have set up 7 separate questionnaires if we wanted to manage these separately. On creation of the IEG script in Admin, all the questions would be set up as mandatory questions.

1. From within a determination package, select *New Questionnaire*.

   - Name Juvenile Detention
   - Type Screening
2. Select *Edit Questions* from the actions dropdown.
3. Create the questionnaire in the IEG Editor (see IEG documentation for guidance), setting up preconditions based on the flowchart in the "Questions" section above. For example, Serious Delinquent question group only to be asked if Mandatory Holds questions are False.
4. On exiting and refreshing the Questionnaire page, the questions will be visible.
5. Select *Release*; this makes the questionnaire available to be added to a Decision Matrix.

## Configuring the Decision Matrix

As there is only one decision type in this assessment, one decision matrix is required. The assessment requires a single outcome to be returned from the combination of answers entered. Therefore, we do not set the Multiple Outcomes indicator.

We do not require scoring of any type to be returned, so we do not set the Cumulative Score or Score By Outcome indicators on creation of the matrix.

As this assessment determines the level of placement, the highest priority outcome is Level 1: Secure Detention, and the lowest priority is Level 5: Release. Our next step is to add outcomes to the matrix in this order. This means that the matrix will check first if Level 1 conditions are satisfied; if not, then Level 2; and so on.

1.  From within the determination package, select *New Decision Matrix*.
2.  Enter matrix details.

    - Name Juvenile Detention
    - Type Screening
    - No indicators set
3.  Select the matrix from within the Decision Matrices cluster.
4.  From the decision matrix page, select *Edit Matrix Data*.

    The decision matrix editor is now launched.
5.  Select the *Question* action button to add questions to the matrix.
6.  Select the Juvenile Detention questionnaire from the drop down list.
7.  Select all questions for which we'll need to add rules (see below) and add them to the matrix. As all questions have Boolean answer types, it is not necessary to configure the answer values, as they're added by default.
8.  Select *Outcomes*, and select the outcomes of Level 1, Level 2â€¦Level 5 to be added to the matrix.
9.  Select answer combinations using AND and OR logic as required, and adding combinations for the outcomes as required, for example:

    - If Current Crime of Violence = True => Level 1 outcome
10. Save the matrix, ensuring there are no validation errors, then exit the matrix editor.
11. Select *Release* from the decision matrix home page.
12. From the determination package home page, select *Release*.

    Note: Due to the set up of preconditions in IEG, it is not necessary to include the logic from groups other than the last group asked. We can therefore condense the assessment logic down to the following rules:

    - If Answer 1 or 2 or 3 is 'Yes'

      then result is Level 1
    - If none of the above,

      AND answer 13 or 14 or 15 or 16 is 'Yes'

      then result is Level 1
    - If none of the above

AND answer 21 is not 'Yes'

then result is Level 2

- If none of the above

AND answer 17 or 18 or 19 or 20 is 'Yes'

then result is Level 3

- If none of the above

AND answer 22 is 'Yes'

then result is Level 4

- If none of the above

AND answer 22 is not 'Yes'

then result is Level 5

## Associating the determination configuration with the assessment

The determination configuration must now be associated with the assessment to make it available to the Determination Based Assessment component.

1. From the Decision Assist shortcuts section, select the *Juvenile Detention* screening assessment.
2. Select *New Determination Configuration*.
3. Add the Juvenile Detention configuration to the assessment.

The Juvenile Detention assessment is now ready to be run by the caseworker.

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