# Guidelines for Using the Expression Editor in RL6

This guide is intended to provide an overview on the use of the Expression Editor in the RL6/PEER application. This document will take you through the understanding of where the Expression Editor is used, why it would be used and how to build simple and complex expressions.

**What is the Expression Editor?**
The Expression Editor is a tool used to create a series of **conditions** within PEER that must be met for another action to take place.

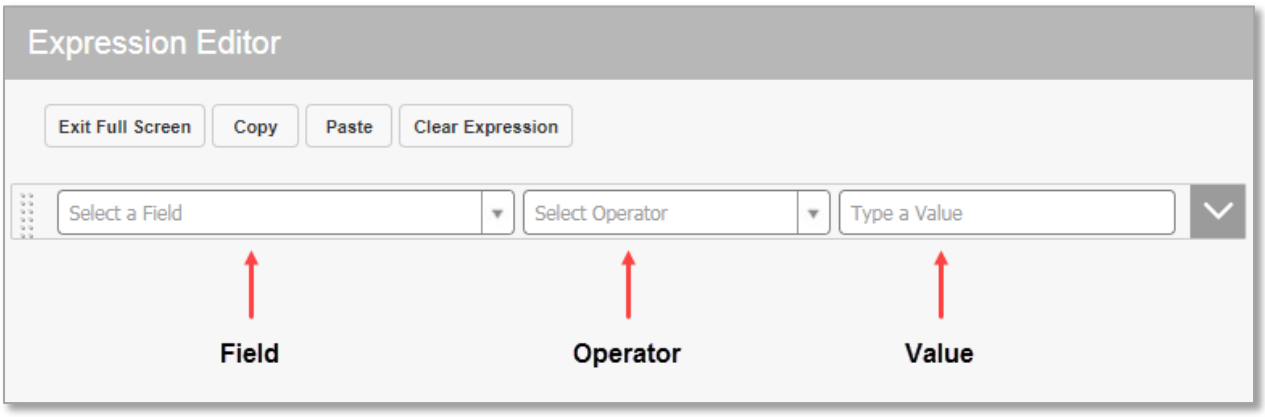
**Why and when is it used?**
It is used when results need to be narrowed down to specific items. For example, when running a report or a search, do you need to see everything? Or do you only need to see values from General Location A, or values from General Location B? Or do you need to see values from both General Location A and General Location B only?

**Where is it used?**
There are many areas within PEER that the Expression Editor would be used to build conditions. Expressions are used when searching for files, when triggering alerts, when setting up Personal Views, and when running reports. The Expression Editor is how we at AQORD set up a user's scope, which then sets that user's access.

For example, the screenshot below on the left shows the number of files returned in a search if no expressions are specified. The screenshot below on the right shows the number of files returned if a condition is applied to only show Fall events.



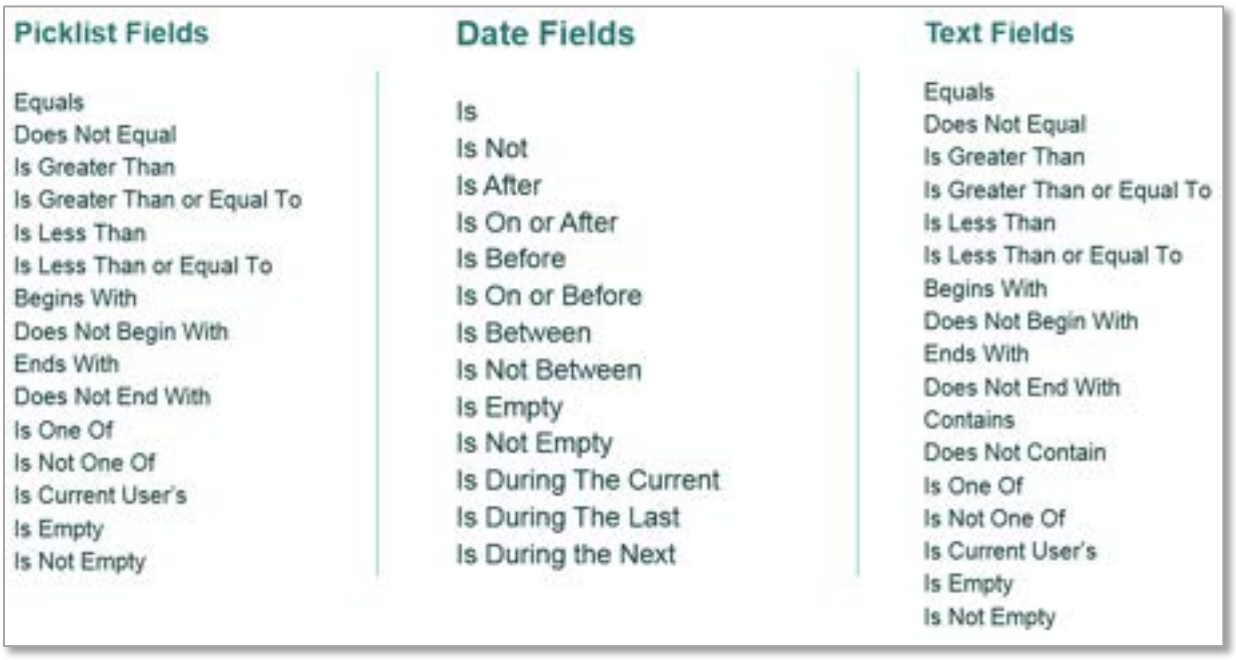
**Elements of a Condition**
Every condition in the Expression Editor is made up of 3 elements – a **Field**, an **Operator** and a **Value**. When building conditions, you must work from left to right by first selecting a field, then an operator and lastly a value.




When the small downward arrow for the Field element is clicked, it will provide you with a list of all the available fields in the system. It is a good idea to be familiar with the fields that are available on your forms and what you want to build prior to accessing the Expression Editor. Once the arrow is clicked, you can start typing the name of the field you are looking for to narrow down the results. You can type the full name of the field or even a partial word from the name. Sometimes, there are a few fields with the same name so it is good to be aware of the bold black heading in the Field list which can help you identify which section you are selecting the field from, or where it "lives" in the form.

When the small downward arrow for the Operator element is clicked, it will provide you with a list of all available operators for the field that you have selected. The list can consist of operators like equals, does not equal, is between, is empty etc. The operators available will vary based on the type of field that is selected.

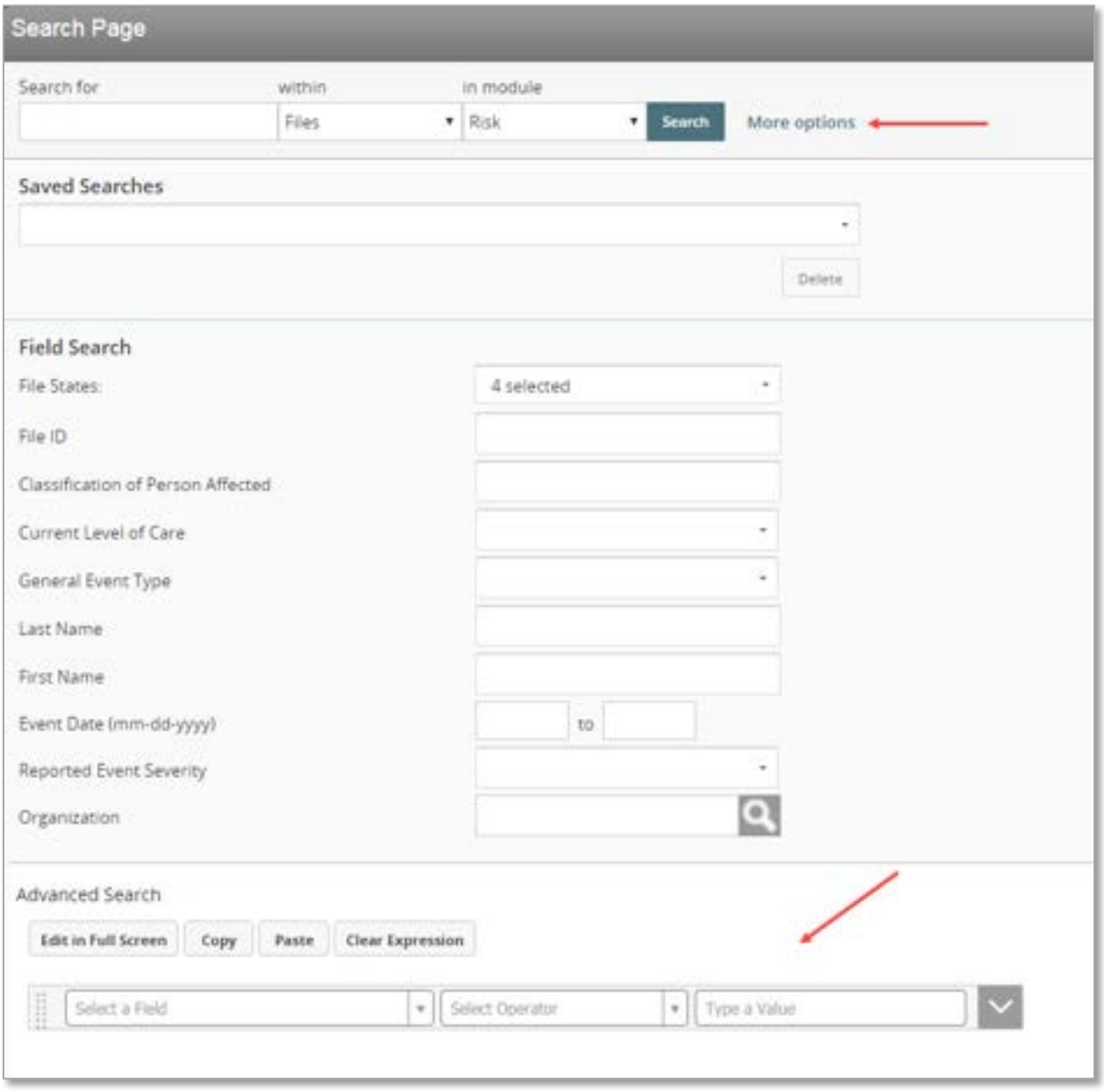
The below screenshot is a list of all the various operators available based on the type of field selected.



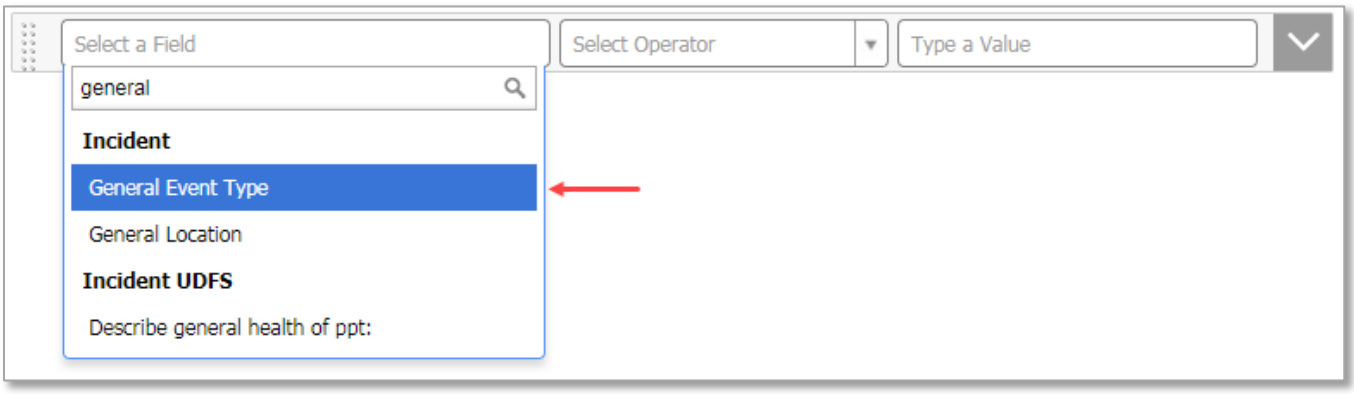

The value field format will change depending on the type of field that is selected. If the field that is selected is a pick list, then it will display a small downward arrow to allow you to select a value from the list. If the field is a date field, it will display a calendar allowing you to select a specific date. And if the field is a text field, it will allow you to free type information in the element.

**Example 1: Building a Simple Condition**

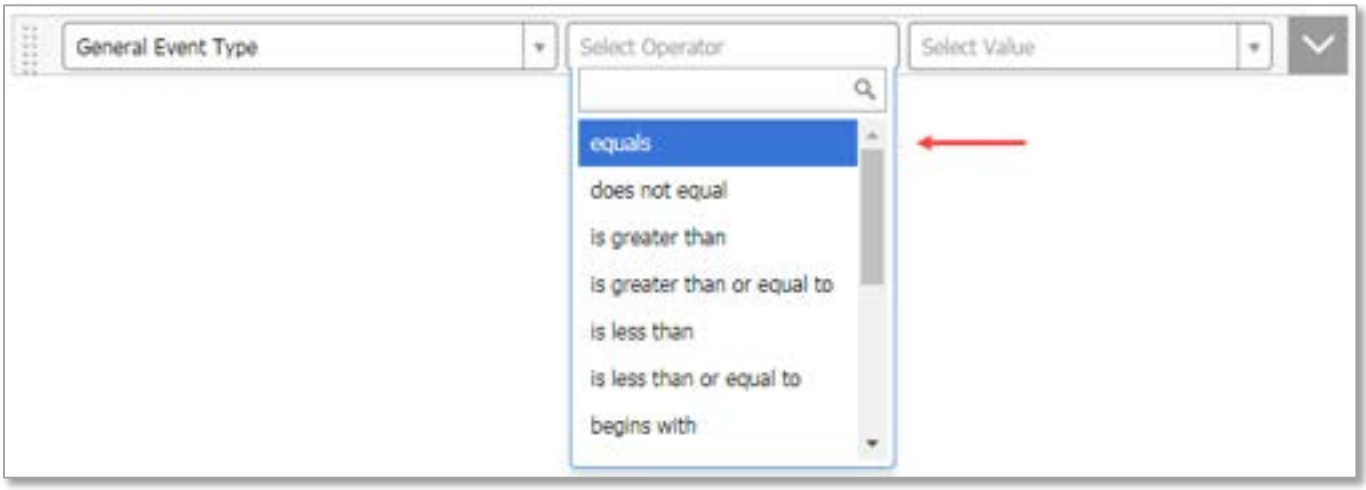
For this example, let's build a single line condition see only files that are Falls. We can build this expression on the search page by clicking on the 'More Options' link at the top and then scrolling down to the bottom of the expanded area called Advanced Search.



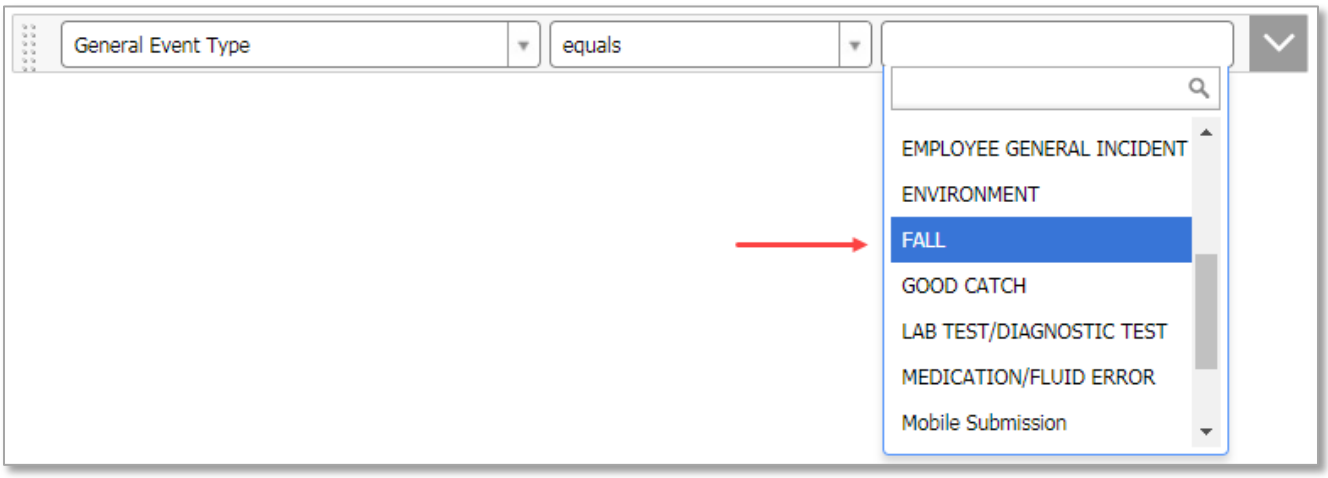

Always start by Editing in Full Screen; then start by clicking on the downward arrow in the Field element, and type 'general' to bring up results that match the field General Event Type because that is the field name that a Fall is found under; other general event types include Medication Errors, Skin/Tissue, Safety/Security/Conduct, etc. Select General Event Type found under the Incident heading; this is where it lives within the PEER form.



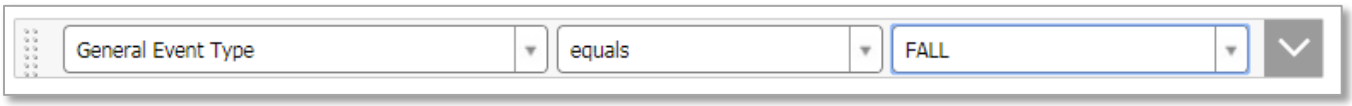

Next, click on the downward arrow for the Operator element and select 'equals.' This is because we want the file results to be Fall files, so we want to tell the Expression Editor that the General Event Type has to equal a Fall.




Lastly, click on the downward arrow in the Value element and from the available list, which will show all General Event Types, select Fall.




This completed condition would now allow the results to only display files that were Falls.

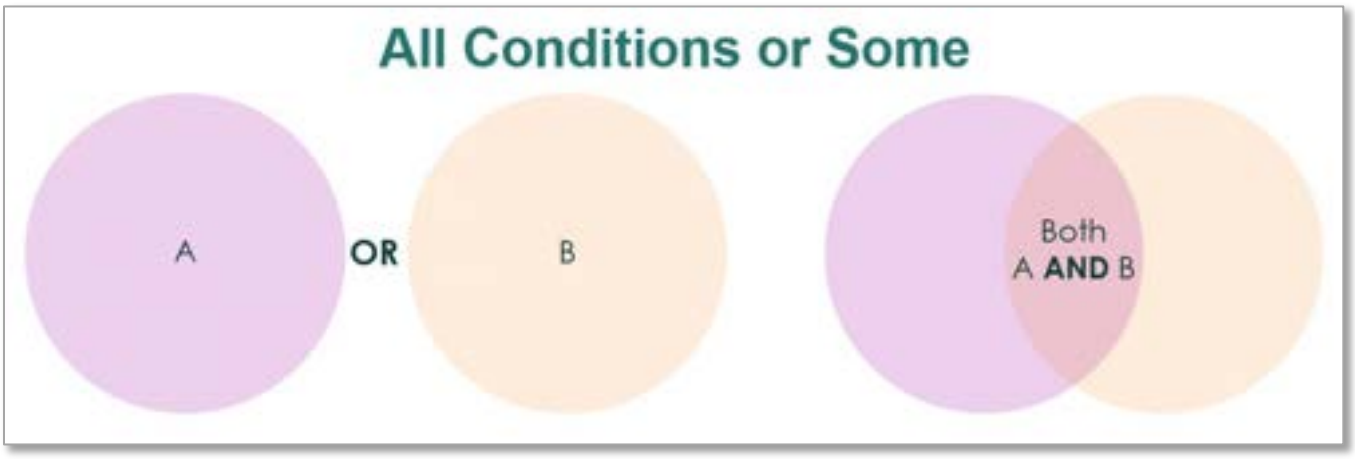



**Using AND vs OR**

Anytime you have an expression with more than one condition, you will need to use a connector such as AND or OR. The number of conditions will always depend on the number of criteria needed to identify the specific files/data required.

When using **AND**, all conditions listed MUST be met in order for results to be returned; thus, **AND** will band them together.

When using **OR**, any one of the conditions can be met in order for results to be returned; thus, **OR** gives you more.




**Do I need an expression? Should I use AND or OR?**
Do I need to see specific files? **Use an Expression**
Do I need more than one line in my expression? **Use a Connector**
Do all conditions have to be met? Use **AND**
Does any one of the conditions have to be met? Use **OR**

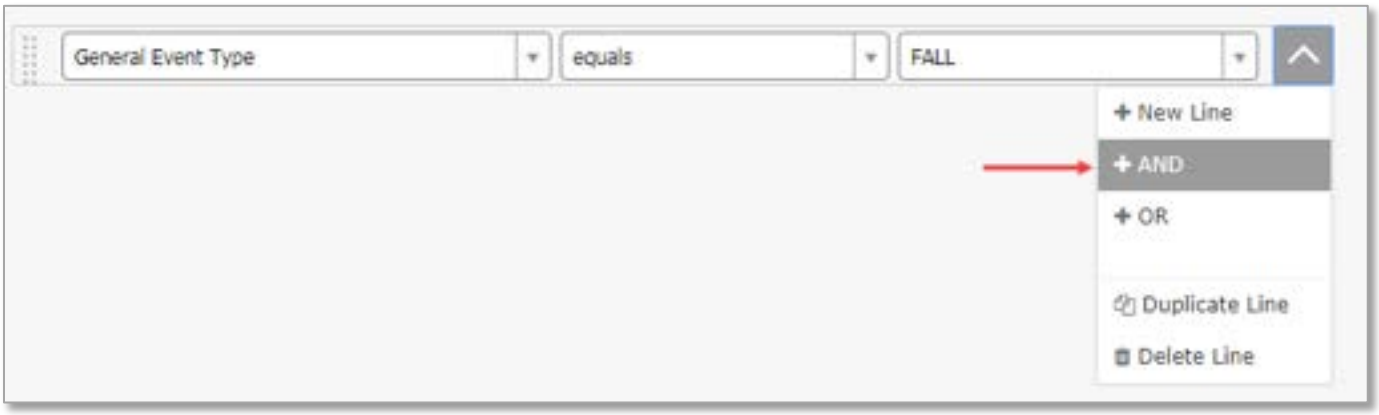

The above expression states that the files must meet both criteria in order to be returned because both conditions are connected with an AND. The files **must** be Falls and they **must** have a General Location of Skilled Nursing. Both conditions must be met to return results.


The above expression states that the files can meet either criteria in order to be returned because both conditions are connected with an OR. The files can be Falls or they can have a General Location of Skilled Nursing. The Or will give you more: the files are either falls OR the event (any event, not just falls), happened in Skilled Nursing.

**Example 2: Adding on to a Simple Condition**

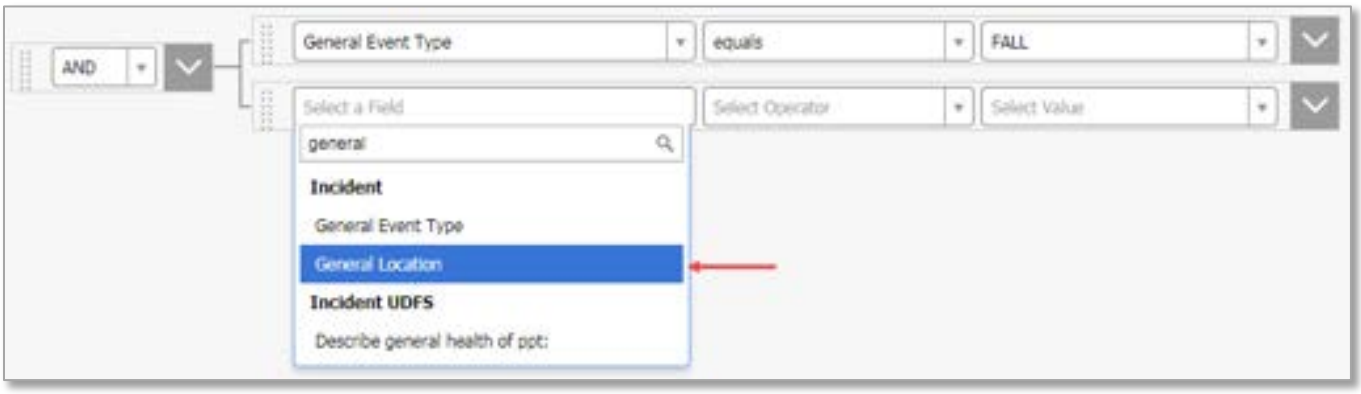
Let's build the above expression and state that we want to see all Falls that happened in the Skilled Nursing area only of the community. Using the steps from Example 1, add the first condition to state that General Event Type equals FALL. To add a connector to the existing condition, click on the white downward arrow in the grey box at the very right end of the condition.


From the menu that appears, select + AND.

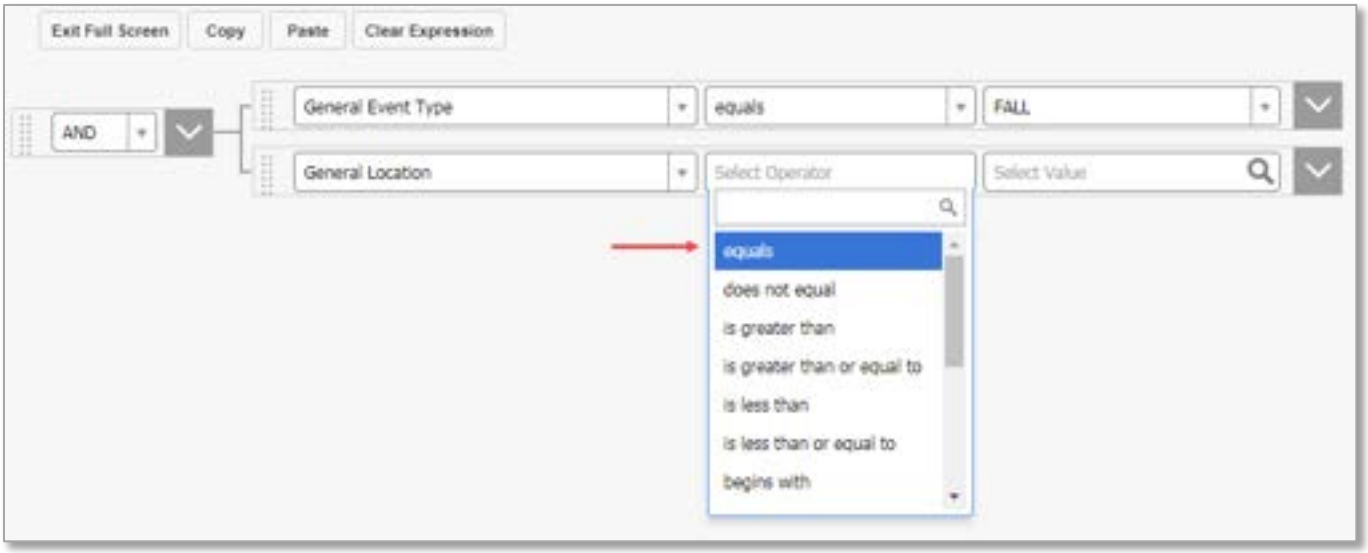



+ New Line will create a new blank condition that is connected to the original with an AND by default and can also be used in this instance. + AND will add a new blank condition line with an AND to the original, and + OR will add a new blank condition line with an OR to the original. Duplicate Line will connect the same condition as the line you select it on, and it will be connected with an AND by default. Delete Line will allow you to delete the condition line.

Once + AND has been selected, in the Field element for the new condition line, search for and select General Location. Remember that the General Location is specific to how your organization list is built. You may have a General Location called Skilled Nursing on your community, but it also may be called something different, such as Healthcare, or Gwynedd House, or Anthony House or Cedarwood. You must know how your own organization's location list is set up. We recommend printing out an event file for the area you are going to do the report for, or do the search for, so that you know how your location list is set up. Every organization's list is set up differently based on what they wanted.




In the Operator element for the new line, select ‘equals’.




And in the Value element, for this example, select Skilled Nursing.

Your final expression will look like the below screenshot. It will return all files that match Falls that happened in the Skilled Nursing area of the community.


If a mistake was made and you wanted to see all Falls or all events that happened in the area of Skilled Nursing, rather than deleting the expression and starting over, you can click on the small downward arrow to the right of the word AND and from the dropdown menu, select OR instead.

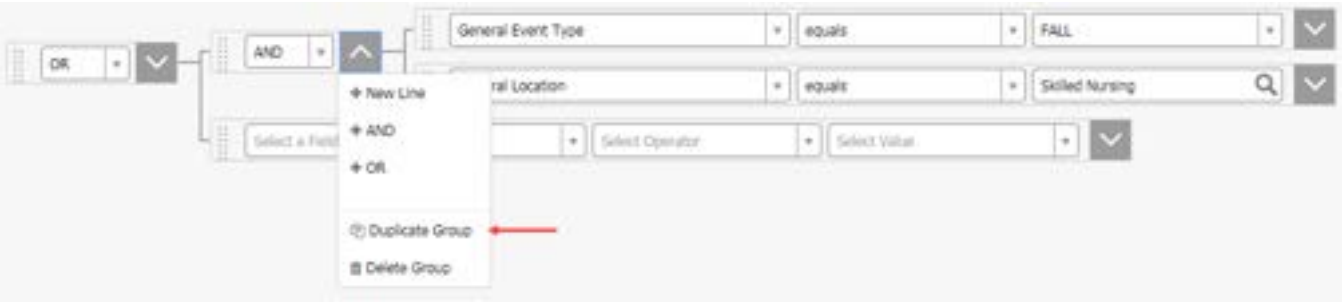

**Example 3: Adding a Second General Location**

Building off the condition so far, we can add an additional line to say we would like to see Falls for Skilled Nursing **or** for Personal Care. Within a file, it is only ever possible for one General Location to be selected. A file can only ever be Skilled Nursing OR Personal Care, it can never be both at the same time, so we would want to make sure that our expression reflects that correctly by using OR when connecting these locations. There are two ways to build this condition out.

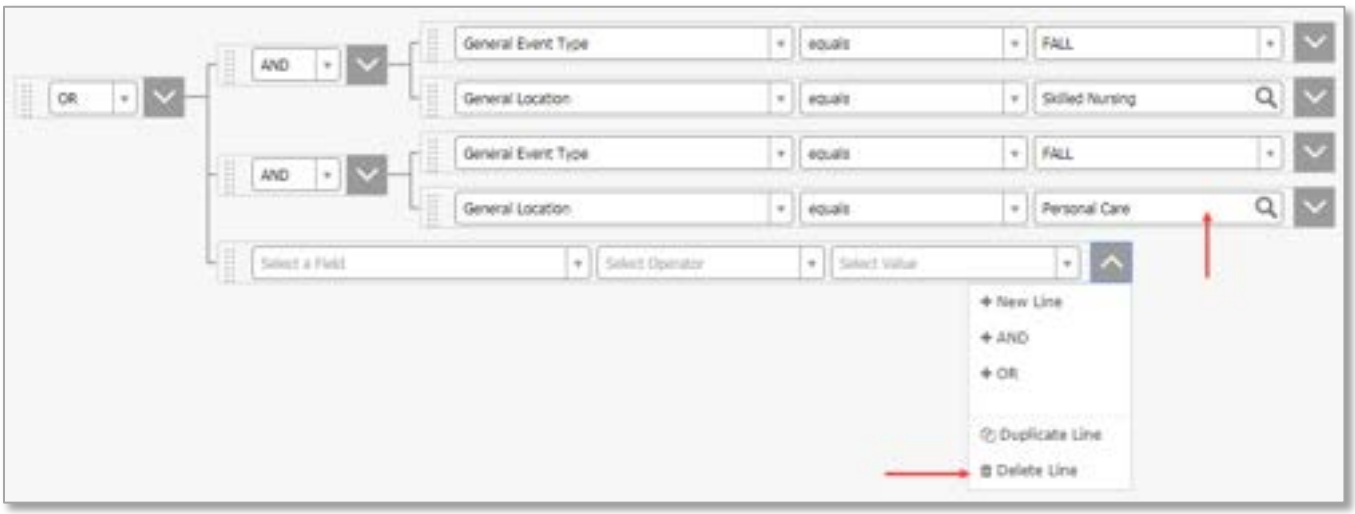
The first way, with the existing condition, click on the white downward arrow beside the AND menu at the left of the expression.


From the menu that appears, click on + OR and you will get the following:

You can then continue by filling out the new blank condition row the same way we did in Example 1 and add a General Location to it by following Example 2. As an alternative, you can also click on the white downward arrow beside AND once more and select Duplicate Group.




We will now have an expression where we can click on one of the Skilled Nursing Values and change it to Personal Care. We can also click on the white downward arrow next to the blank line and select Delete Line.

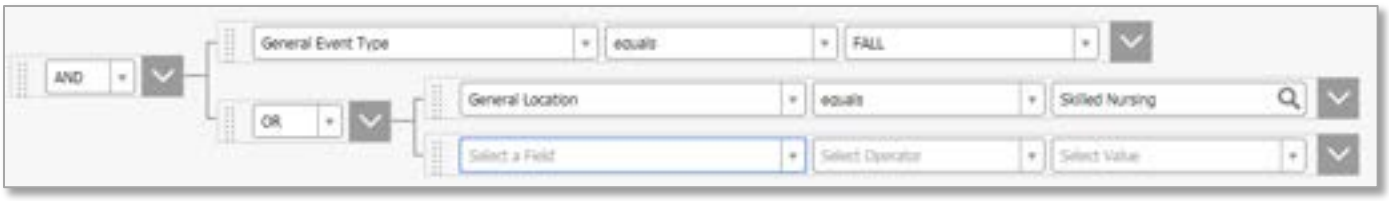



The final result can be read as show me Falls and General Location of Skilled Nursing OR show me Falls and General Location of Personal Care.

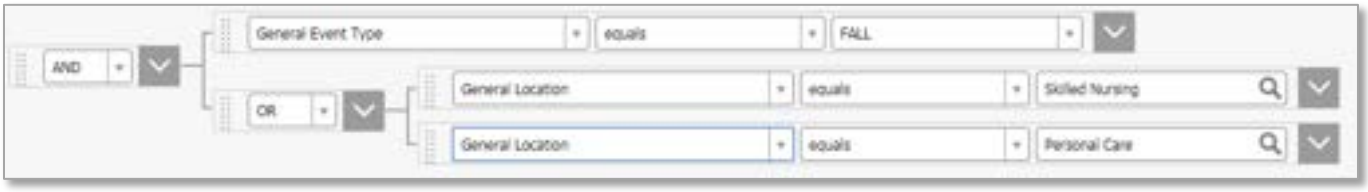
A much simpler way to build this expression is to simply add an OR condition directly to the General Location line.

Starting with our expression from Example 2, click on the white downward arrow on the right side of the line stating General Location equals Skilled Nursing. From the menu that appears, click on + OR.


This adds a new blank condition line attached only to the existing General Location line rather than to the whole expression.




We can now fill out the new blank condition by selecting General Location in the Field element, 'equals' in the Operator element, and Personal Care in the Value element. The final expression will look like the below screenshot.

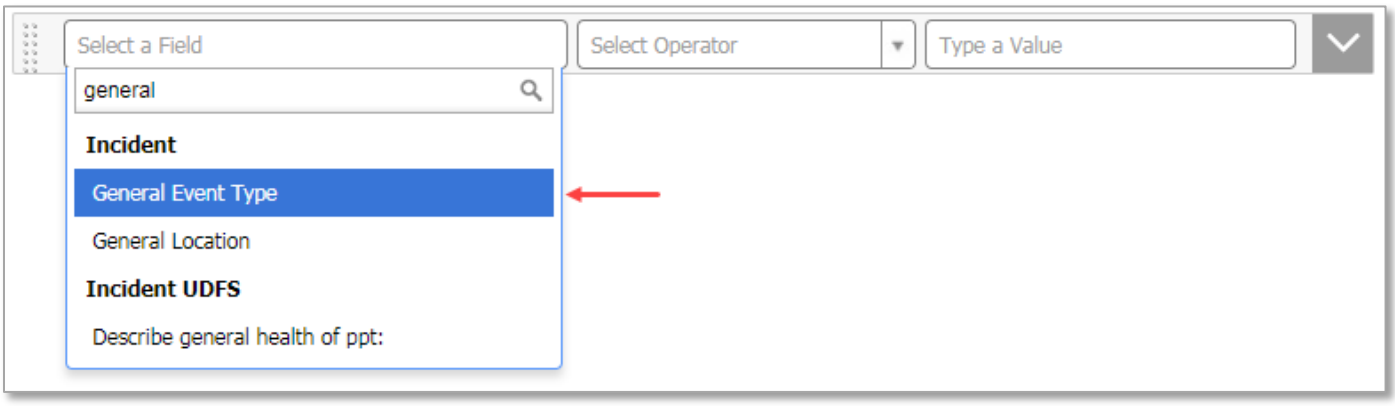



We can read this expression as show me all files where the Event Type is Falls AND where the General Location is either Skilled Nursing OR Personal Care.

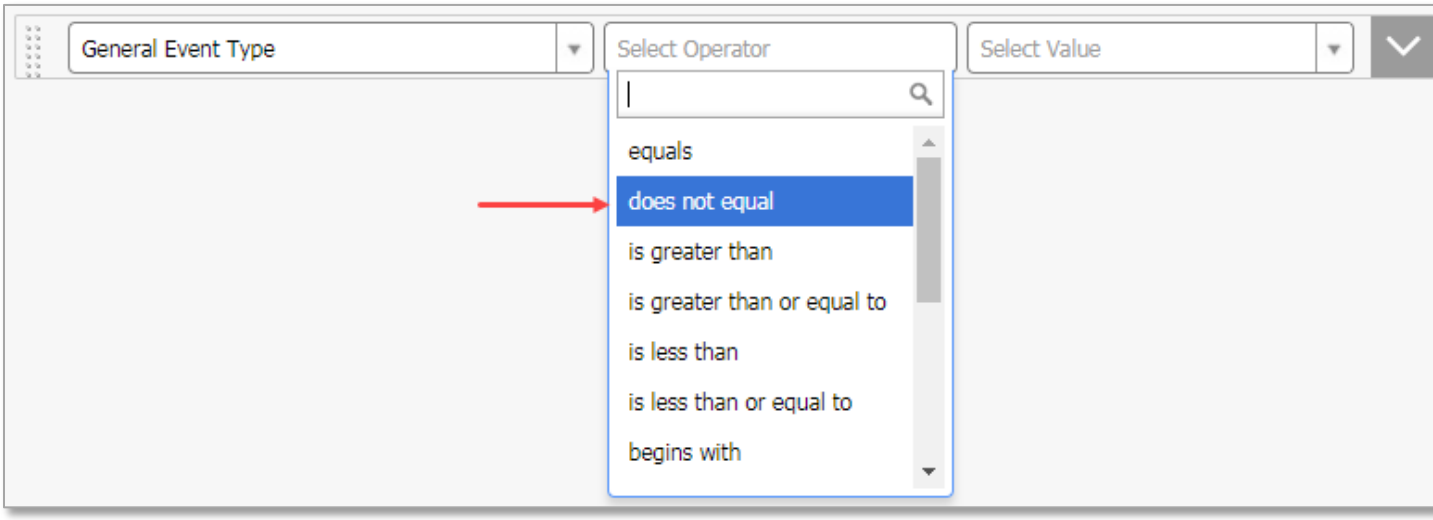
**Example 4: Excluding Values**

An exception to the AND and OR rule is when you want to exclude something in your results. We can think of the expression as 'I do not want to see Falls AND I do not want to see Medication/Fluid Errors'. This would then give you all the other General Event types, such as Skin, Safety/Security/Conduct, Complaints, etc. When excluding items, you have to connect the condition lines with an AND.

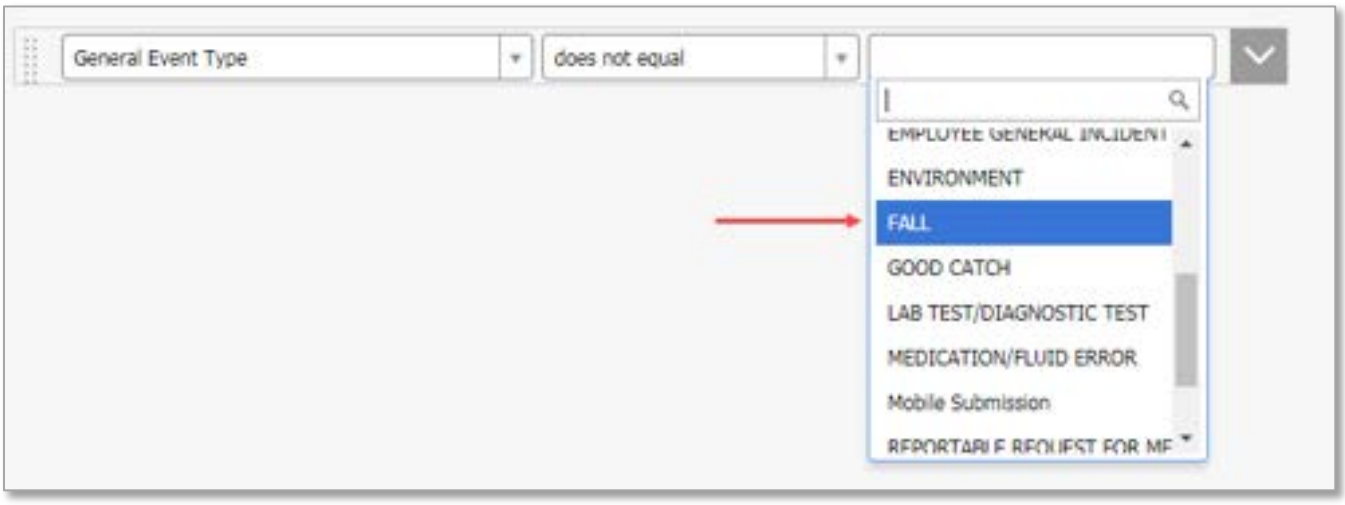
Starting with a fresh expression, from the Field element select General Event Type.




From the Operator element, this time select ‘does not equal’.




And lastly, from the Value element, select FALL.




For the next part to also exclude Medication/Fluid Error, click on the white arrow to the very right of the condition and select Duplicate Line.


This will add in a second row of the same condition, already connected with an AND. Simply click on the FALL Value in the second condition line and change it to MEDICATION/FLUID ERROR.


The expression will now read as do not show files where the General Event Type is a Fall and do not show where the General Event Type is a Medication/Fluid Error.


Using similar logic, we can also build an expression to show all files for certain locations but exclude certain event types. An expression like that would look like:


The above expression is saying, show me files for the General Location of Skilled Nursing or Personal Care and do not include any Falls.

**Example 5: Multiple Choices Using 'Is One Of' or 'Is Not One Of'**

Say we want to see files that meet multiple criteria such as multiple Severity Levels or multiple General Locations. One option is to build it with + OR and + AND statements as we have in the previous examples. When there are many Values, having all the additional lines can make the expression

cumbersome to read if you must keep scrolling to get all the information. Another option, which is a much more condensed and cleaner option, is to use the operators ‘is one of’ and ‘is not one of’.

**Is One Of**

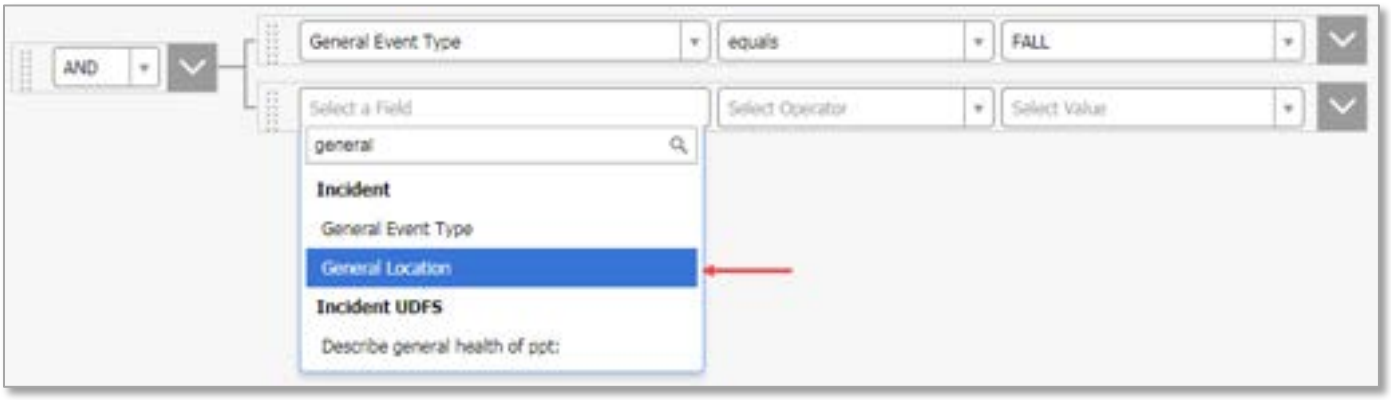
Let’s start with the expression at the end of Example 3 above where we said we want to see all files where the Event Type is Falls AND where the General Location is either Skilled Nursing OR Personal Care.


In addition to those two General Locations, let’s add 4 more General Locations using the steps we’ve learned above and the + New Line or Duplicate Line functions:  Health Center, Home Care, Community Space and Assisted Living.

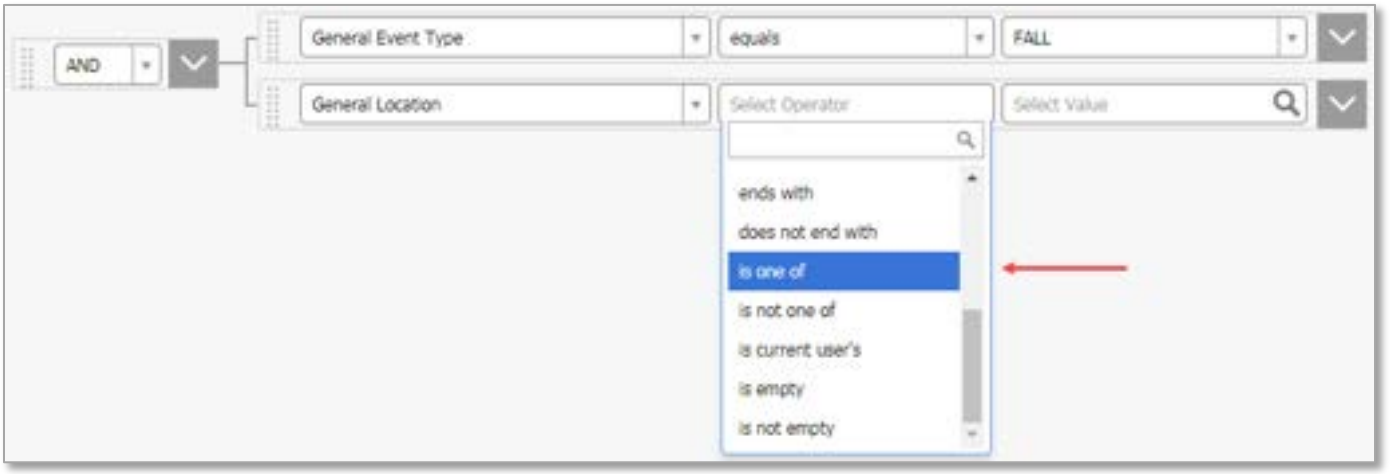

If this were to continue and additional locations need to be added, this would make the expression a very long one and more complex expressions can become difficult to read.

As an alternative, we can use the ‘is one of’ operator which acts like an OR. Start with the base condition of General Event Type equals FALL, click on the white arrow to the right of the condition and select + AND to get a new blank condition line.


In the new condition line, select General Location for the Field value.




In the Operator element for the new line, this time select ‘is one of’.




Next, click on the Value element and search for and select Skilled Nursing as the first General Location we’re adding in.


Once Skilled Nursing is clicked, your Value element will now look like this:


You can immediately start typing to look for the next General Location as the cursor will still be active and blinking within the Value element. Start searching for and select Personal Care.


When searching in a condition that uses ‘is one of’, you cannot type any spaces otherwise it will consider whatever you have typed before the space as a value itself. For example, when searching for Personal Care, if I type personal space, personal will be added as a value which would be incorrect. If that happens, you can click on the small x next to the incorrect value to remove it from the list. The same can

be done if a value was incorrectly selected and added to the list, or if you wish to no longer include it in the list.


Also, if you click away from the condition line and the Value element closes, but you need to continue adding more selections, simply click on the Value element and the list will expand once more.

Once Personal Care has been added, continue the with same method, and search for and select the other 4 General Locations: Health Center, Home Care, Community Space and Assisted Living. Once all the values have been selected, your expression will look something like this:

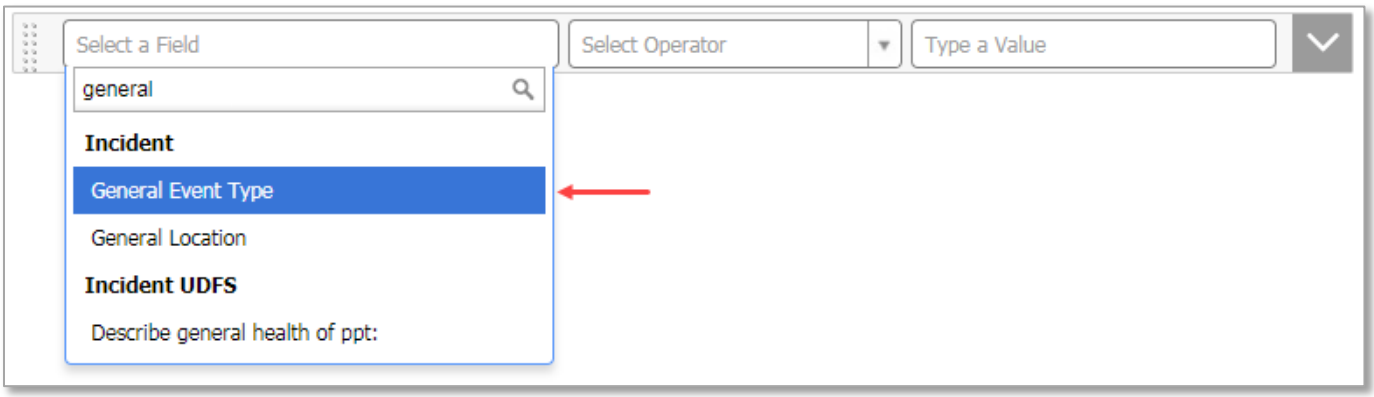

Clicking away from the condition will collapse all the values into a single line. If you wish to see all of them again, you can either click in the Value element to see the list like in the screenshot above or hover your mouse cursor over the Value element and a little pop-up will appear showing all the values that have been selected. If the list is very long, the pop-up can be difficult to read, so it may be better to click and view the entire list.


This expression now states that if the files are Fall files and the General Location **is** one of those that have been selected, show the results.

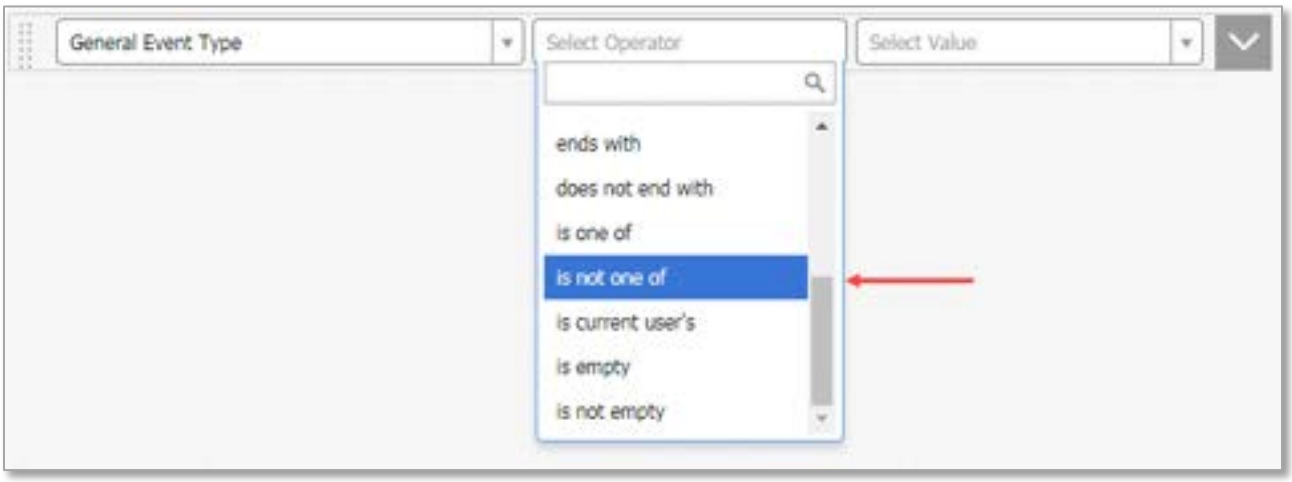
**Is Not One Of**

In the same way, when trying to exclude certain values as we did in Example 4, rather than connecting multiple lines using + AND, we can use the operator 'is not one of.' In Example 4, we wanted to exclude Falls and Medication/Fluid Errors from our results. Let's now also exclude 3 additional Event Types: Safety/Security/Conduct, Data Breach, and Employee General Incident.

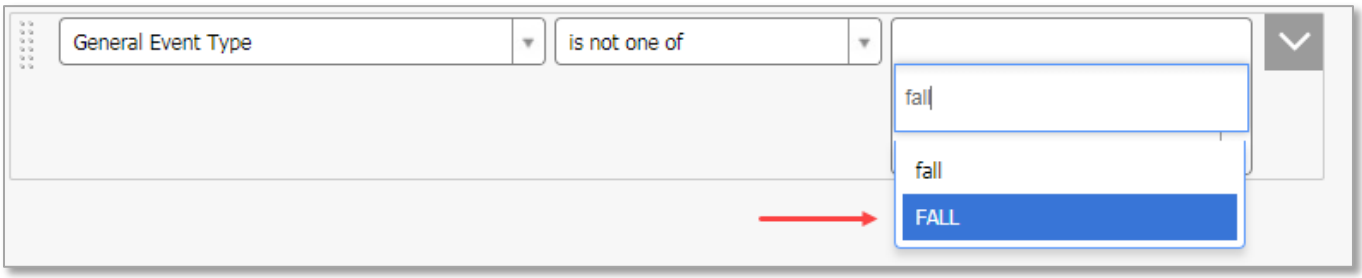
Starting with a fresh expression, from the Field element select General Event Type.




From the Operator element, this time select 'is not one of.'




And now, similar to how we did it with the 'is one of,' in the Value element, search for and select FALL first.




Once FALL has been selected, continue by searching for and selecting the next 4 values as well: Medication/Fluid Error, Safety/Security/Conduct, Data Breach, and Employee General Incident. Once all have been selected, your expression will look like:


And when collapsed, will look like:


This expression now states that if the Event Type of the files **is not** one of those in the list, then show the results.