Configure Interventions and Data Elements

In order to perform meta-analytical extraction, you first need to Configure Interventions and Data Elements, which you do from the Configure MA Extraction page in order to reuse the tag hierarchy.

Interventions correspond to the types of therapies/treatments/medications etc. that were compared across the articles and appear as purple in the Tag Hierarchy.

Data Elements refer to all other relevant data from the article that will be extracted for meta-analytical data and appear as gold in the Tag Hierarchy.

Note: Only one hierarchy can be designated as your Intervention hierarchy, but any node in your hierarchy can be configured as a Data Element. There is no requirement, however, that every tag be configured as a data element!

Where does Meta-Analytical Extraction Configuration take place?

MA Extraction can be configured "Configure Extraction" in the Extraction module. *Note:* this page is the same as the "Configure Tagging" page, but with the MA Extraction configuration section automatically open.

Extraction configuration is integrated into tagging configuration in order to use your existing hierarchy to structure your Interventions and Data Elements.
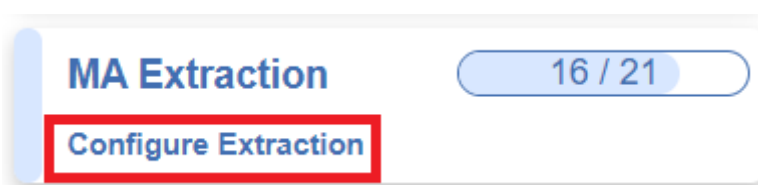
Configuring Interventions

1. Navigate to Extraction Configuration panel

When you click on Configure Extraction, the MA Extraction Configuration panel should automatically open.

2. Toggle to Interventions

3. Click on the "Interventions" Root Tag

The Intervention list on the right corresponds to all of the tags underneath the "Intervention" root tag

Intervention tags can easily be changed. For example, by simply opening the

Interventions tab and clicking "Implants", all tags under "Implants" are now Interventions for your Extraction.
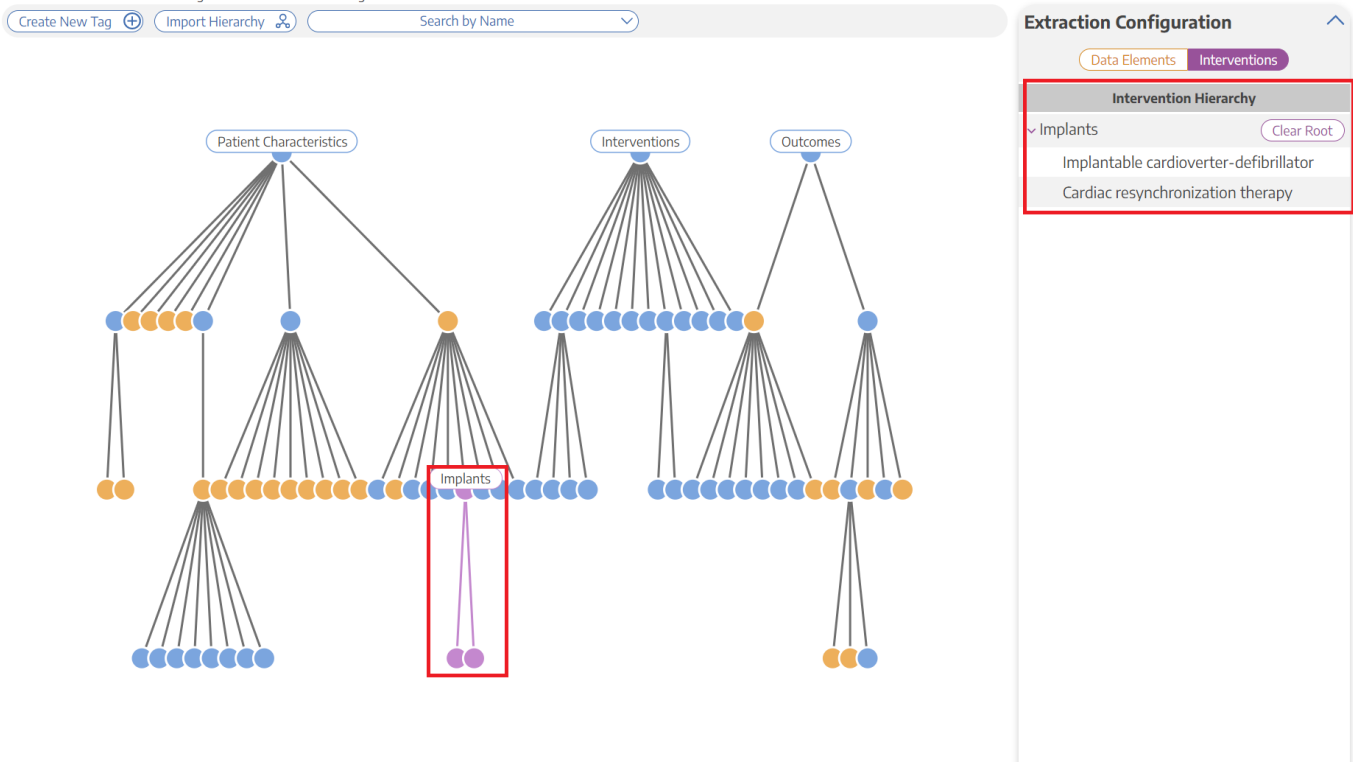
This is important to note because if you accidentally leave the incorrect hierarchy as the Interventions and then you go to extract, these incorrect Interventions options (for instance, "Implants" tags in the example above) will appear under the Intervention drop-down menu instead of the "Interventions" tags

Luckily, this is easily fixed: just navigate back to the Data Elements Menu within the Tagging Hierarchy, click on the "Interventions" root tag, and viola, your Interventions are Interventions once again!

Configuring Data Elements

1. View the Data Elements Menu

Navigate to the Data Elements Menu and click "Data Elements"

The data elements tab will show you a list of all tags, which you can select either in the list or by clicking on the tag node.

2. Turn tag into Data Element

Click the plus sign next to a tag to turn the tag into a Data Element

3. Select the Data Type

Continuous, Dichotomous, or Categorical (Mandatory)
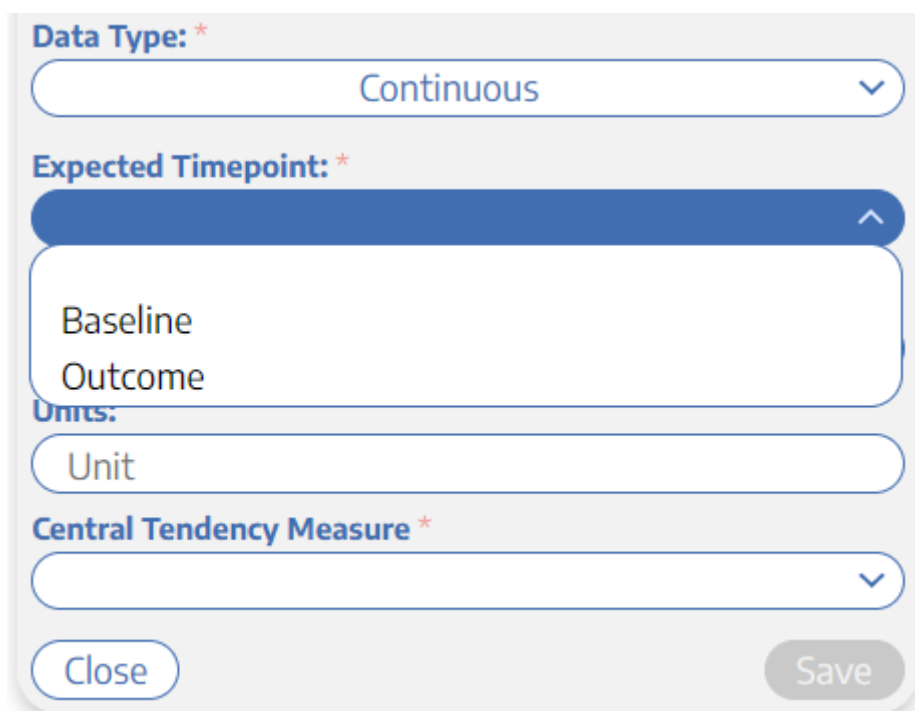
Depending on the data type, different inputs will populate. For example, if a data element is categorical, you will be able to specify the different categories.

4. Select the Expected Timepoint

Baseline or Outcome - Choose the Expected Timepoint based on whether the data was collected at Baseline or as an Outcome (Mandatory)

If the data element can be both a Baseline and an Outcome, choose Baseline.

5. Select the Direction

Higher Better or Lower Better (if applicable) - For example, the Data Element is "Mortality", Lower Better would most likely be appropriate

6. Add the Measurement Units

Example: Mintues, mL, kg (if applicable)

7. Add the Central Tendency Measurement

Mean or Median (Mandatory for continuous variables) - After choosing Mean or Median, it will also ask
you about "Dispersion Measure" (SD for Mean; IQR or Range for Median)

8. Click Save

Confirm that the configuration worked based on whether the node turned gold, and move on to
configure any other Data Elements of interest

How many Data Elements should you create?

When configuring your Data Elements, it is vital to recognize that **every Data Element you
configure must be**:

1. collected as a metric across all studies, adding time to your project, and
2. presented on Synthesis, potentially confusing readers as to which Data Elements are vital to
   your review/meta-analysis.

It is also important to understand that, unlike with primary studies, multivariate comparisons are
limited in meta-analytical research by the aggregated nature of the data. Thus, all Data Elements
should be of direct interest to compare among Interventions of interest.

There is no exactly 'correct' number of Data Elements. However, remember that: `the minimum # of metrics collected = # of study arms * # of Data Elements configured`, and this can increase if multiple timepoints are collected.

Therefore, the following **suggested guidelines** may help estimate the appropriate number of Data Elements and project timelines:

- **1-3 Data Elements:** <5 min per study, highly focused Synthesis. May provide too little context for key outcomes, but optimizes project timelines & ease of quality control.
- **4-7 Data Elements:** 5-10 min per study, focused Synthesis. Likely represents the primary & secondary outcomes of interest, as well as high-value background data.
- **8-10 Data Elements:** 10-20 min per study, detailed Synthesis. Likely represents all primary & secondary outcomes of interest, subsidiary endpoints, and any background data of interest. Data sparsity may be a problem. **Recommended that you keep your review to this size or smaller!**
- **10-20 Data Elements:** Up to an hour per study, intensively detailed Synthesis. Likely represents most data elements reported in underlying studies; may represent an unfocused research question. Should be reserved only for extensive reviews where the endpoints of interest are undefined, or review types that require going beyond conventional methods.
- **20+ Data Elements:** Several hours per study, potentially overwhelming Synthesis. Can introduce not only data sparsity but collection quality concerns. May reflect an unfocused research question or unconventional review type. Recommended that such reviews be split into smaller pieces if they must be undertaken.

These are suggestions only, but can have major impact on the quality, focus, and timeliness of projects. If you have any questions on this guidance, feel free to Contact Support!

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