Experiment node – where details can be provided about the hypothesis and the effect of interest
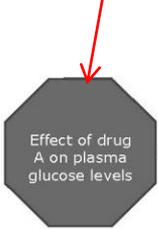
Animal characteristics node – if the animals used in the experiment have distinct sets of characteristics e.g. males and females, or different genotypes, multiple animal nodes should be used

Intervention node – in many experiments groups are subjected to interventions, such as a surgical procedure or a drug injection, this nodes contains information about the treatment the animals receive

Independent variable of interest node – represents the parameter specifically manipulated to test a predefined hypothesis. It is also known as: predictor variable, factor of interest. The node includes information about the type of variable; this is needed to generate a recommendation regarding appropriate methods of analysis

Experimental unit node – used to define the experimental unit. Multiple nodes should be used if the experimental unit is not the same throughout the experiment

Group node – groups are subjected to processes such as intervention or measurements. The group node contains information about sample size and whether it is a control or a test group

Variable category node – connected to the independent variable node, it defines the levels of the independent variables (of interest or nuisance) used in the experiment. It is also used as 'tags' on the main part of the diagram to indicate which groups are associated with which levels
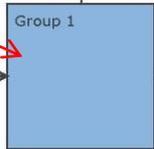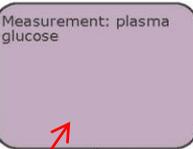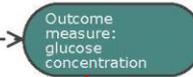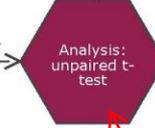
Allocation node – if there are more that one group, the allocation node is used to describe how the groups were formed. The node contains information about the randomisation strategy

Measurement node – in all experiments, groups should at one point be subjected to a measurement, this node contains information about the timing of the measurement and whether it is conducted blind

Outcome measure node – details the response measured (also known as dependent variable or response variable)

Analysis node – which contains details about how the data is analysed. All variables included in a particular analysis should be connected to the analysis node.

Effect of drug A on plasma glucose levels

uses animals

Animal characteristics: diabetic mice

comprises

Experimental unit: mouse

Independent variable of interest: drug A

has category — Vehicle

has category — Drug

is factor of interest for

Pool of animals

subjected to

Allocation: complete randomisation

produces

Group 1

subjected to

Pharmacological intervention 1

Vehicle

produces

Group 2

subjected to

Pharmacological intervention 2

Drug

then

Measurement: plasma glucose

recorded as

Outcome measure: glucose concentration

is output for

Analysis: unpaired t-test