Objects: member\_item, claim\_item, category, group, interaction, hierarchy

mapping maps a member item to categories or claim item to categories

category is made up of claim items and can condition on member items

group is made up of categories or interactions and can condition on member items. Allow group of groups?

hierarchy can be composed of categories, groups, or interactions. Mixed types not allowed.

ICD-9 diagnoses and NDCs are included out-of-the-box as claim items

Age is the only continuous member variable,

#### Diagnoses already exist in system, don’t need to be explicitly defined! #####

1. Radj <- riskAdjuster() is the class constructor
2. Radj.add\_cc(cc\_list,description\_list,score\_list) #Define the condition categories, condition category scores are added
3. Radj.map\_age\_bands(break\_list,single expression(optional),score\_list) #Define age cutoffs, takes advantage of the findInterval function in base R
4. Radj.map\_claim(claim\_item\_list,cc\_list,single expression (optional)) #Allows many-to-one, one-to-one, one to many mapping, vectorized, CDPS requires that dx to cc depend on aid level, Where expression is evaluated at the member level
5. Radj.add\_group(cc\_list,score,expression) #takes in condition categories and interaction terms. adds a grouping where the grouping replaces cc’s in scoring, if a dx is part of a grouping, it’s condition categories are NOT scored. Takes advantage of the any function built into base R
6. Radj.add\_interaction(group\_list,expression,cross.or.dot,scores) #can contain a group or category, cross adds all cross terms, dot pairwise adds., if cross then scores needs to be a
7. Radj.add\_hierarchy(cc\_list,interaction\_list,group\_list) #Adds a hierarchy, where first cc’s trump later ones. Can contain condition categories, groups or interactions.

### Sample data included

### Standard risk adjusters included

Relationships between classes or between attributes? Which classes need to be public with one another?