Phrase I Data Intake

The outcome of the phrase is to build a single data intake of microbiome data (ubiome and others) along with metadata into a single repository which may be shared across applications. In other words, ***a single point of upload***.

# Data for intake

This can be broken down into the following groups of data which are time dependent

* Microbiome details (example: uBiome Json etc)
* Common physical characteristics
  + Height
  + Gender
  + Age
  + Weight
* Life Style information
  + Diet
  + Exercise
  + Supplements
  + Alcohol consumption
* Clinical laboratory measures (with date of measurement)
  + See <http://www.cpmc.org/learning/labtests.html> for a starting point
* Prescription Drugs
* Symptoms – these are often hierarchical and may need a 0-5 scale, for example:
  + Headache
    - Tension
    - Cluster
    - Sinus
    - Migraine
    - Hypertension
    - Allergy
* Conditions – self described
  + Often self-diagnosed.
* Conditions – ICD 10, this is essential for marketing to medical professionals
  + Downloadable from <ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/ICD10CM/2018/>
* Metabolism (KEGG)
  + Possible screen scraping

# UI Design and Usability

It is suggested that UI be designed based on the preliminary microbiome data. For example, if there are a large number of diabetes associated bacteria then items associated with that should be what is prompted for.

Based on the results of the metadata entered, the subsequent questions should be ones with positive answers. For example, a gluten free diet would likely make certain symptoms less likely.

Freeform predictive data entry should be implemented. “IBS” would cause a list of possible ICD10 types to appear.

3586 K58 0 Irritable bowel syndrome Irritable bowel syndrome

13587 K580 1 Irritable bowel syndrome with diarrhea Irritable bowel syndrome with diarrhea

13588 K581 1 Irritable bowel syndrome with constipation Irritable bowel syndrome with constipation

13589 K582 1 Mixed irritable bowel syndrome Mixed irritable bowel syndrome

13590 K588 1 Other irritable bowel syndrome Other irritable bowel syndrome

13591 K589 1 Irritable bowel syndrome without diarrhea Irritable bowel syndrome without diarrhea

13592 K59 0 Other functional intestinal disorders Other functional intestinal disorders

KEGG values should be auto-extracted from ubiome pages if possible.

# Schema TSQL Table Names

## Taxonomy

## SampleTaxonomy

## SampleDiet

## DietHierarchy

## SampleLabMeasure

## SampleSymptom

## SymptomHierarchy

## SampleCondition

## ConditionHierarchy

## SampleIcd10

## Icd10Hierarchy

## SampleMetabolism

## SampleLifeStyle

The term “hierarchy” does not indicate a strict 1:n hierarchy, rather a n:m directed map without cycles.

Example

|  |  |  |
| --- | --- | --- |
| Parent | Item |  |
| K58 | K580 | Irritable bowel syndrome with diarrhea |
| K58 | R197 | Diarrhea, unspecified |
|  |  |  |