Input Files

There are a series of input files which will determine how the ABM processes data. They are located in the defaults/input directory in the same directory containing the main.exe. When a scenario is run through the ABM, a copy of the input values is stored in the /input subdirectory for each job. This allows the job to be rerun and return the same results. The defaults/input directory has ten sub-directories. Each subdirectory has data used for a specific function. They are:

1. catchment – this sub-directory contains the file *Facility-Catchment-Population-Distribution.csv*. This file contains the population distribution bins for each facility based on the population density clusters and travel times to the nearest facility for each population cluster. It is generated from the ./default/input/population/*newTravelTimes.csv*, ./default/input/population/*pop\_1km\_array\_2015.csv* and the ./default/input/facilities/*case-reg-703-with-dist.csv* files. If the Facility-Catchment-Population-Distribution.csv file doesn’t exist, the ABM will create it and store it in ./stats/*Facility-Catchment-Population-Distribution.csv*. You will need to move it to ./default/input/catchment/*Facility-Catchment-Population-Distribution.csv* to prevent the ABM from creating it every time it runs.
2. diseases – this sub-directory contains the file *diseases.csv*. This file contains information specific to each disease such as: incidence, proportion of infected patients presenting, uninfected patient to infected patient ratio of patients presenting, transmission factor, etc. These represent national values for these parameters for each disease and will be overridden by values generated by values generated by the ./default/input/*input-change-parameters/priorRangesAndDistribution.csv* file and the ./default/input/*region-district-specific-data/region-district-specific-data.csv* file.
3. facilities – this sub-directory contains the files *case-reg-703-with-dist.csv*. This file contain a list of all the facilities used in the model. It also contains information about the facilities, such as location, type and tier.
4. facility-specific-data – this sub-directory contains the files used in the different scenarios analyzed by the ABM. Each file contains a list of the facilities being used in the analysis and the location of testing centers for each disease and test. It also contains certain test capacity information for each facility. Currently, the TB analysis uses the following files: facility-specific-data-current-model-169-plus-96-dist-hosp-xpert-testing.csv, *facility-specific-data-current-model-169-smear-testing1234-xpert-testing.csv* and *facility-specific-data-tier1-7-xpert-only-by-tier.csv*. These correspond to the decentralized, baseline and fully-decentralized scenarios. When running the ABM, these correspond to scenario options 8, 9, 10.
5. input-change-parameters – this sub-directory contains the file *priorRangesAndDistributions.csv*. The variables in this file can be varied over a large range of values to calibrate the model. The user can turn on a variable and have it vary in a beta, geometric or uniform distribution.
6. input-file-names – this sub-directory contains the file *input-file-names.csv*. This file has the names of all the files used in the other input/sub-directories. It allows the user to change the default files used by the ABM for input to different files. If you change the file name in this file it will cause the ABM to look for the new file instead of the default file in any sub-directory. For example, if you have a new *diseases.csv* file that contains other diseases that the six already profiled, you could create a *newDiseases.csv* file in the same format as *diseases.csv* and put in in the diseases/ sub-directory and update the *input-file-names.csv* row to point to the *newDiseases.csv* file. The ABM would then use the *newDiseases.csv* file instead of the default *diseases.csv* file.
7. population – this sub-directory contains the *pop\_1km\_array\_2015.csv* and *newTravelTimes.csv* files. The file *pop\_1km\_array\_2015.csv* has the population broken down into 1km clusters*.* The file *newTravelTimes.csv* is generated by Accessmod to produce the travel times between population clusters and the nearest facility. Unfortunately, Accessmod doesn’t tie the travel times for each population cluster to a specific facility. The program will do that and store the resultant data into *Facility-Catchment-Population-Distribution.csv* in the ./stats directory. Moving the file into the catchment sub-directory will force the model to use it and not regenerate it every time it runs.
8. region-district-specific-data – this sub-directory contains the file *region-district-specific-data.csv*. This file allows the user to control incidence, proportion of infected patients presenting and the uninfected to infected ratio of patients presenting at the regional and district level. District values supersede regional values and regional values supersede national values. There is a document in the sub-directory, *How-to-use-the-region-district-specific-data-file.docx*, that explains the various parameters.
9. run-specific-data – this sub-directory contains the file *run-specific-data.csv*. This file controls certain run time variables during the current run. Examples of variables to be controlled, are the seed number, the number of years in the run and when the run reverts from baseline scenarios to other scenarios and the number of diseases and diseases to be analyzed.
10. tests - this sub-directory contains the file *tests.csv*. The file contains variable information associated with specific tests as they relate to specific diseases. Examples are: sensitivity and specificity of a specific test with regard to a specific disease.