



Oct 30, 2020

Vivarium Population Spenser: Internal migration module

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ABSTRACT

Description of the steps followed by Vivarium Population Spenser library when running the Internal migration module.

DOI

dx.doi.org/10.17504/protocols.io.bn9imh4e

PROTOCOL CITATION

Camila Rangel Smith, Kasra Hosseini 2020. Vivarium Population Spenser: Internal migration module.

protocols.io<https://dx.doi.org/10.17504/protocols.io.bn9imh4e>

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CREATED

Oct 30, 2020

LAST MODIFIED

Oct 30, 2020

PROTOCOL INTEGER ID

44042

MATERIALS TEXT

The tables used to choose the pool of individuals that are going to internally migrate are found here:

[InternalOutmig2011_LEEDS2.csv](#)

The age-gender MSA migration matrices can be found in here:

https://github.com/alan-turing-institute/daedalus/tree/develop/persistent_data/od_matrices

ABSTRACT

Description of the steps followed by Vivarium Population Spenser library when running the Internal migration module.

- 1 Divide the annual outmigration rates for that local authority by the number of time steps existing in a year.

2 For each time step:

- 2.1 Select all individuals in the sample that appear as "alive", have an associated gender and haven't internally migrated in the last 365 days.
- 2.2 For these individuals, get the internal outmigration rate given their age, gender, ethnicity and location and turn it into a probability.
- 2.3 Using random sampling and the internal outmigration probability of the individuals, choose which individuals are going to internally migrate in that time step.
- 2.4 From this pool of individuals use an age and gender specific MSOA to MSOA migration matrix to choose which MSOA (and their respective local authority) they are going to migrate to.
- 2.5 Update their information in the state table with their new location and the time they internally migrated.