|  |  |  |  |
| --- | --- | --- | --- |
|  | SNC | SAPALDIA | EPIC\_NL |
| Population | 8.5 million  (whole Swiss) | 5,000 – 10,000 | 16,440 |
| Home address, | Y | Y | Y |
| move history, reason to move | Y | Y | N |
| Education | Y | Y | level |
| Ethnity | Y | Y | N |
| Occupation | y | y | N |
| Time spent at home and work | maybe | yes | N |
| Traffic mode, duration | limited | yes | N |
| Income | no | yes | n |
| Access to garden | no | yes | n |
| Work address | no | yes | n |
| Notes: | Administrative  Census-based  Aggregated level | Self-reported | demographic characteristics.  physical activity |

Contact Ayoung about SAPALDIA, with a research plan and see how data can be shared.

SNC on the Swiss TPS side.

Detailed software, algorithm, capacity implementation

EPIC-NL may be run on server of Utrecht.

**General design and questions:**

Focusing on the SPALDIA cohort for model development, activity pattern discovery, testing, and the scalability of the developed method.

1. How can we scale it to the national level exposure assessment?

From SPALDIA, find

1. relationship between occupation, education vs. activity patterns (travel duration and traffic model).

2. relationship between occupation, education vs. exposure assessed.

1. Can be have an uncertainty quantification, what bias do we expect?
2. How is exposure assessed with activity-based model vs. distance decay, time geography?

The model developed for SPALDIA will not be a very complicated model, mainly focusing on duration, traffic mode, home and work locations, and then find relationships between them and information available in the national cohort (SNA, EPIC-NL).

**Model design:**

**Time step:**

Focusing on weekdays for model development and validation, day and night, hourly for day time and average for night time.

**Activity:**

* *Weekday:*

Home, work, commuting. [simulations and added randomness on go to supermarket, gyms etc., schedule].

* *Weekend, holidays:*

This part cannot be validated, a purely imagined model may have little scientific values.

For each activity, how do represent activity in GIS operations:

Do we use buffers, routes.

**Other data**

<https://data.geo.admin.ch/ch.bfs.gebaeude_wohnungs_register/>

Air pollution maps:

Static maps. Dynamic maps, Swiss part.

GPS tracks:

GPS track data from Roel/Gerard and exposomeNL for ABM.

Will buy 1000 tracks, for measurements campaign, 2 weeks, usb recharge, mid Januaryl

GPS tracks from Benjaming: E-CARAS, not in SPALDIA? Not processed. 40 subjects, healthy, elderly (above 50).