



Centre for Diet and Activity Research
A UKCRC Public Health Research Centre of Excellence

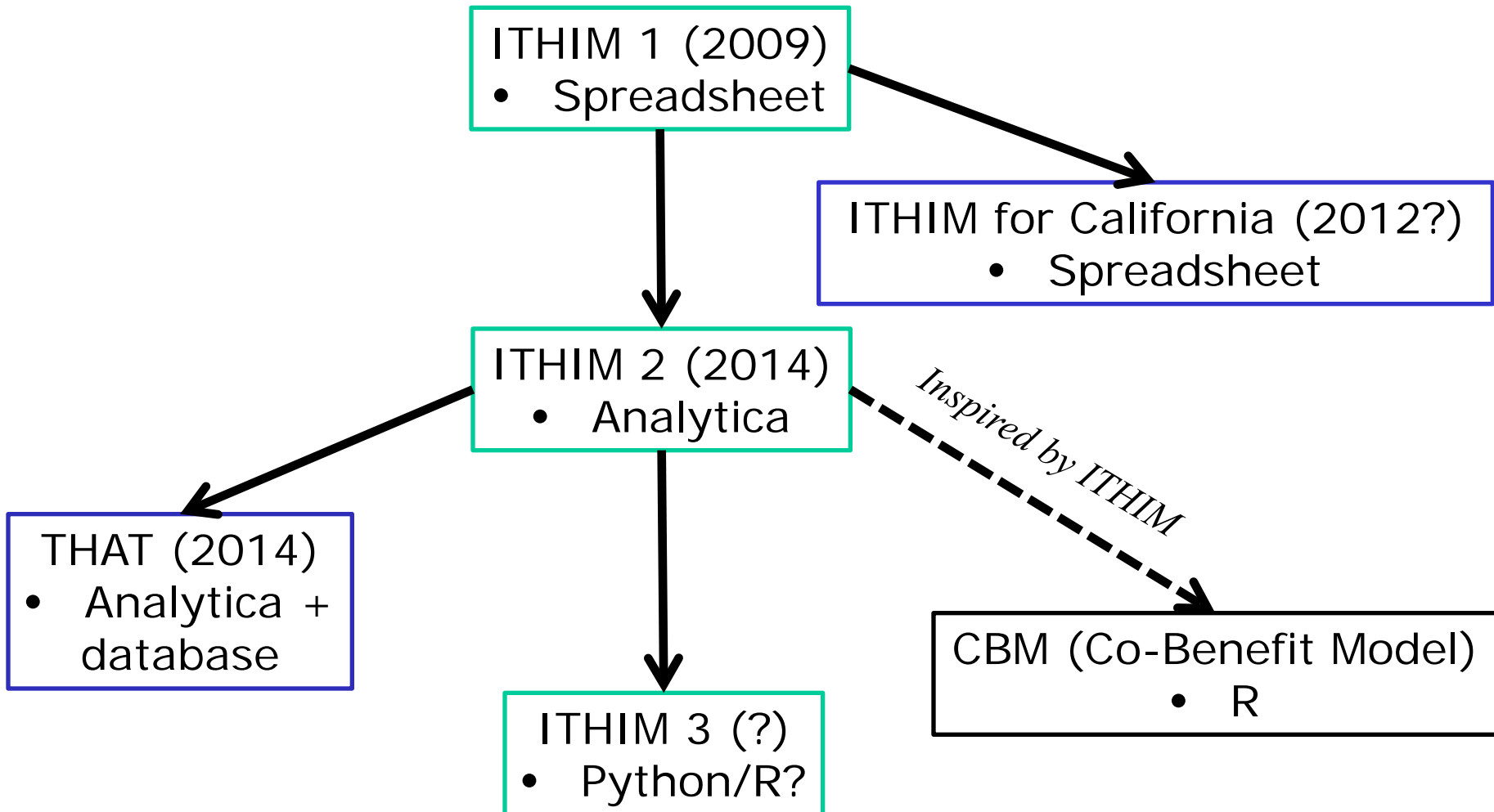
THAT model (Transport Health and Assessment Tool) - demo

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14.4.2015, Moving Active Transportation to Higher Ground

ITHIM family



THAT model

- Geographical area: London, UK.
- Background transport data: London Travel Demand Survey (LTDS), year 2005-12.
- Scenarios: User defined walking and cycling interventions.
 - **Graphical user interface to define scenarios.**
- Health calculation: ITHIM 2.
- Program: Analytica, with Cloud Player functionality.

Interactive demonstration

Link:

<https://www.analyticacloud.com/acp/client/AnalyticaCloudPlayer.aspx?subName=Transport+and+Health+in+London&planType=group&email=mkt27@medschl.cam.ac.uk>

Demonstration phases 1/3

- Scenario definition tab:
 - Scenario 1: Car to Walking, 0-5 km, both gender, 33% of trips.
 - Scenario 2: Car to Cycling, 0-5 km, both gender, 33% of trips.
 - Scenario 3: Scenario 1 + 2.
- Results Travel Pattern tab
 - Mode share: Change in modes in different scenarios.
 - How mode share would change in the London.
- Results Meeting PA Guidelines
 - % of pop. meeting PA guideline.
 - What impact scenario would have for meeting PA guidelines.

Demonstration phases 2/3

- Results health tab
 - Main Results, DALY 0:
 - Overall DALY changes due to different scenarios
 - Main Results, DALY 1:
 - Changes in different pathways. Also gender split.
 - Main Results, DALY 2:
 - Changes in disease diseases. Also Gender split.
 - Result injuries, DALY 0:
 - DALY change due to injuries only

Demonstration phases 3/3

- CO2 tab:
 - CO2 emissions in different scenarios (transport only)
 - Also split by mode
- Change in scenario:
 - Walking distance to 0 to 10 km

THAT – lessons learned and future steps

- THAT was used by Transport for London in 2014 to create & test scenarios.
- Graphical user interface helps to communicate model and results to users (policy makers).
- Developing of intuitive user interface takes time, and requires specific tools:
 - Analytica limited in it's user interface functionalities.
 - Next version of THAT would be done with R or Python to allow more flexible user interface.
- Current development efforts focused on CBM model – some of the lessons learned from CBM-model can be implemented in THAT-model.

ACKNOWLEDGEMENT

This work was undertaken by the Centre for Diet and Activity Research (CEDAR), a UKCRC Public Health Research Centre of Excellence. Funding from the British Heart Foundation, Economic and Social Research Council, Medical Research Council, the National Institute for Health Research, and the Wellcome Trust, under the auspices of the UK Clinical Research Collaboration, is gratefully acknowledged.



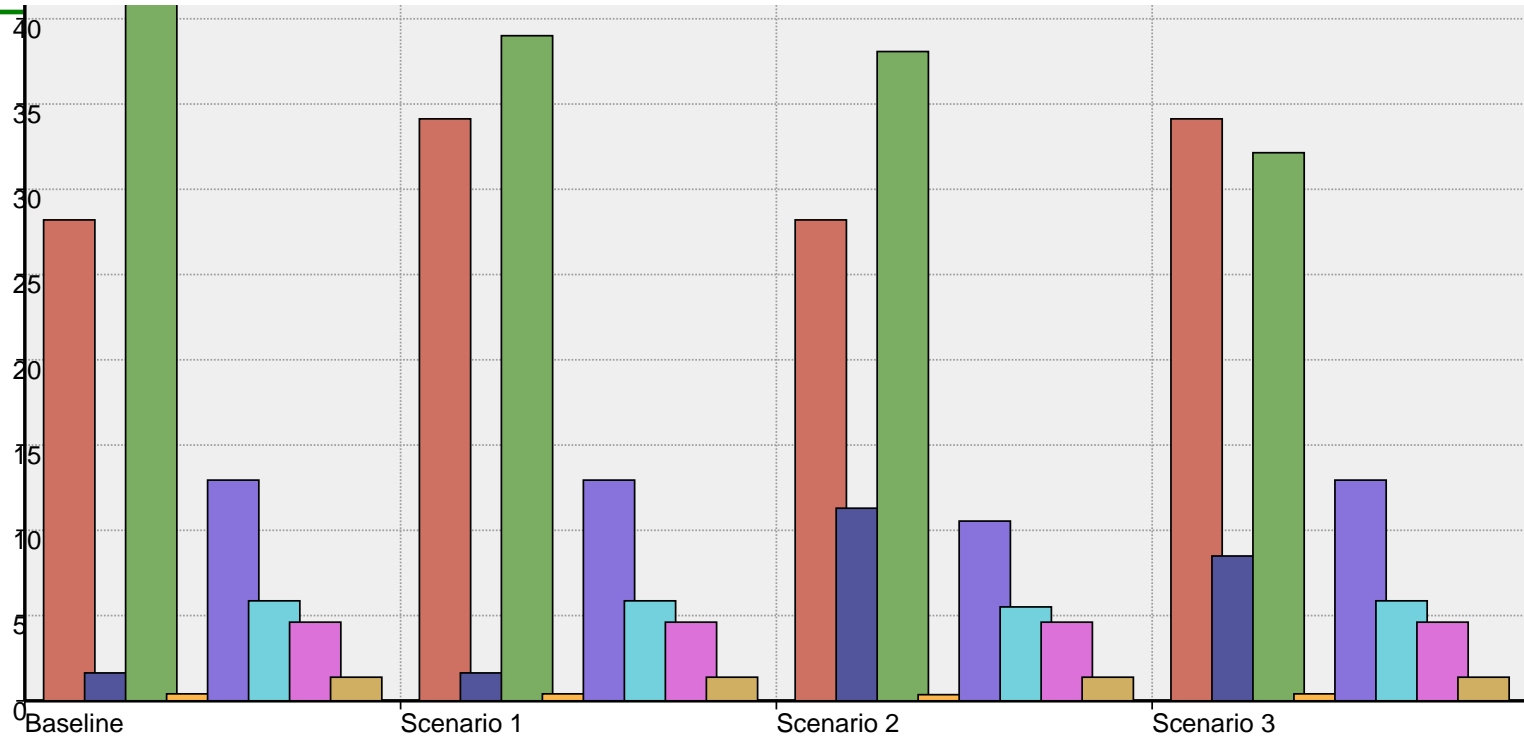
**SCREENSHOTS OF THAT
DEMONSTRATION**

Scenario selection, scenario 1

Scenario 1

	Walking 1	Walking 2	Walking 3	Cycling 1	Cycling 2	Cycling 3	
On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Gender							
Male	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Female	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mode							
Car/taxi	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Motorcycle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Bus, coach, tram	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Underground	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
National Rail/Overground/DLR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Age Group							
0-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5-14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15-29	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
30-44	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
45-59	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
60-69	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
70-79	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
80+	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Trip km							
min	0	0	0	0	-1	-1	
max	5	15	5	10	-1	-1	
% to transfer	33	33	33	50	0	0	

Result: travel pattern



Name of the scenarios

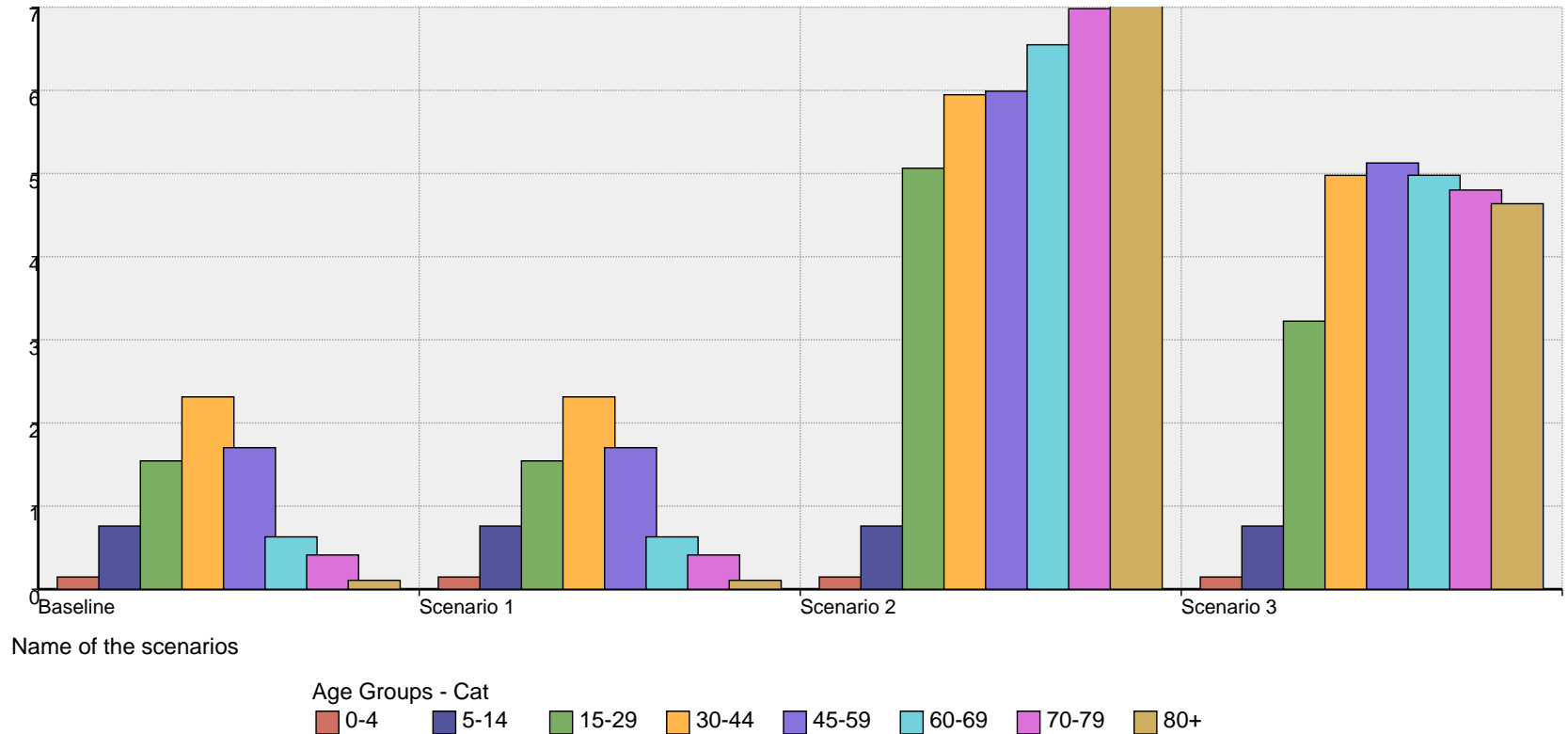
Modes

Walking
Cycling
Car/taxi

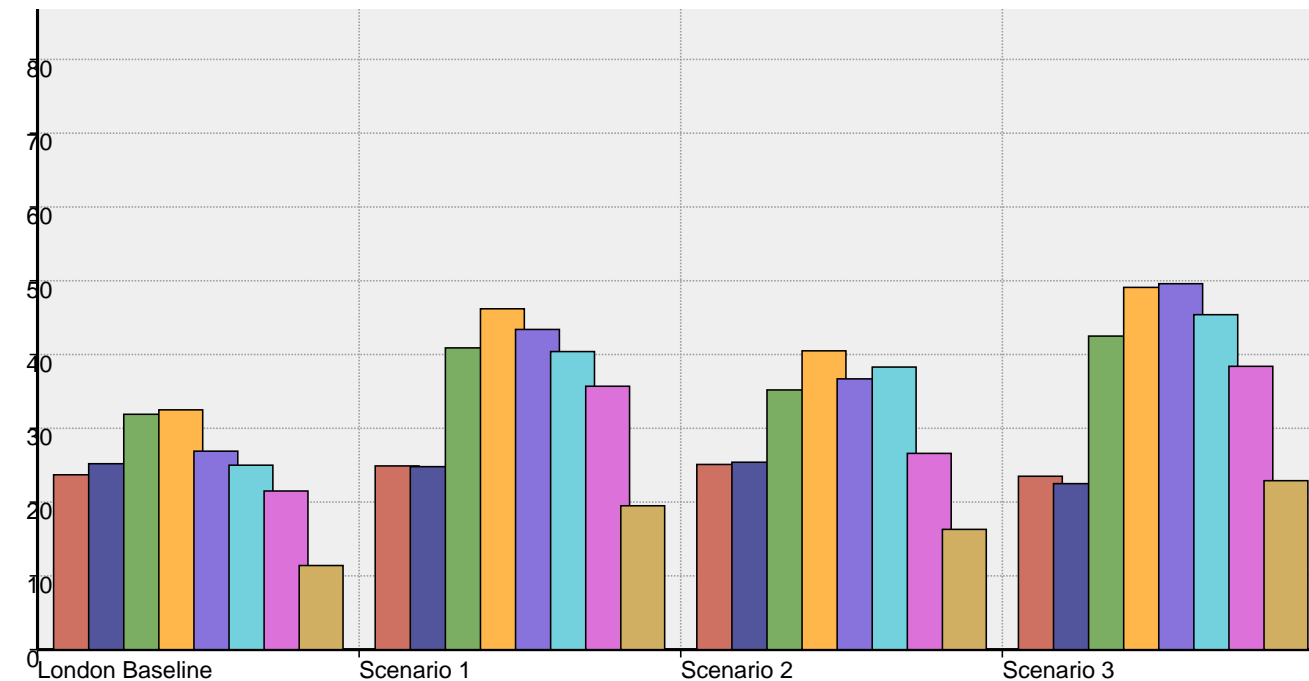
Motorcycle
Bus, coach, tram
Underground

National Rail/Overground/DLR
Van/lorry/other

Results: Mean travel time (cycling, male)



% of population meeting physical activity guidelines (150 min per week)

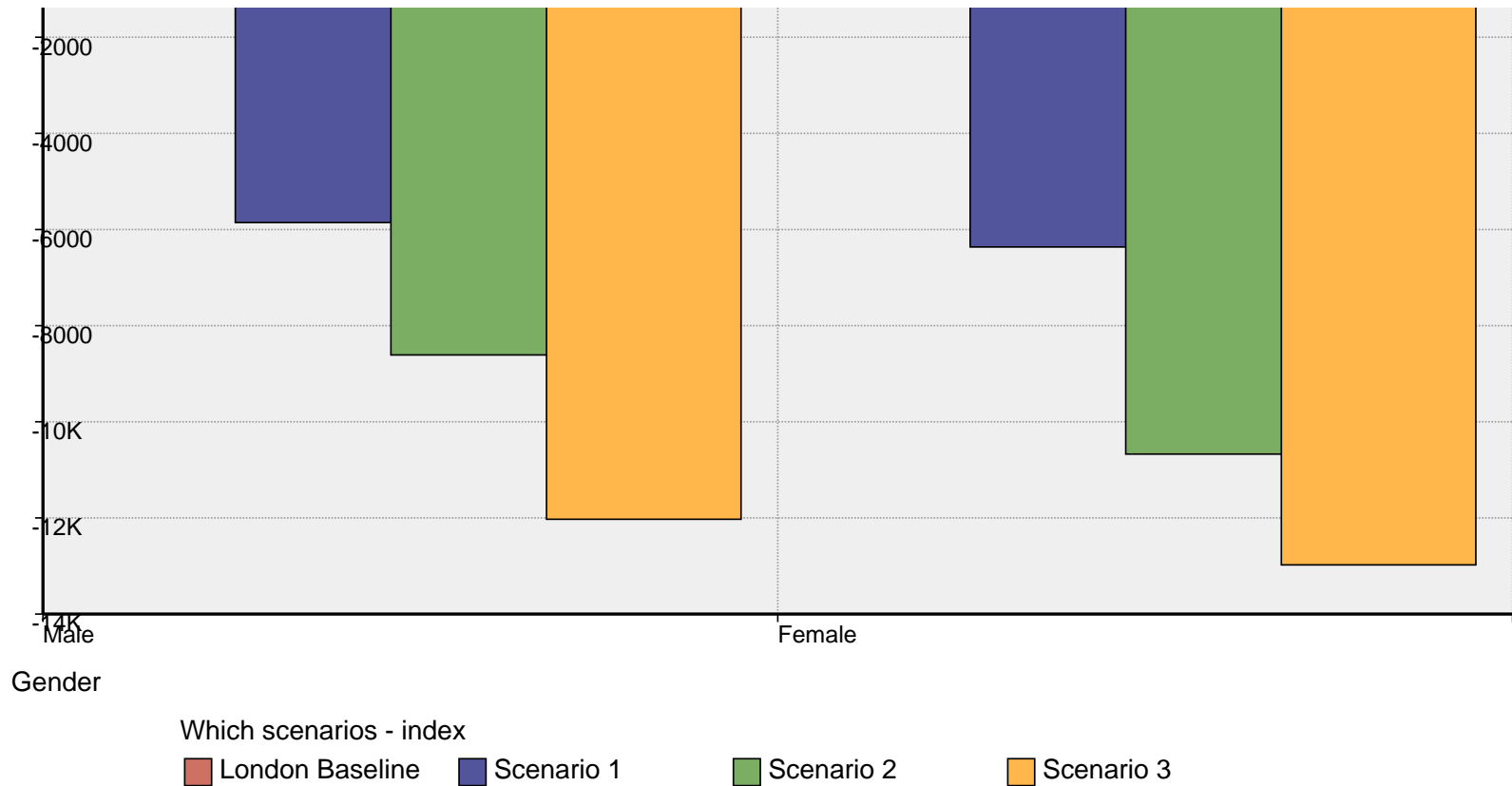


Physical activity guideline scenario

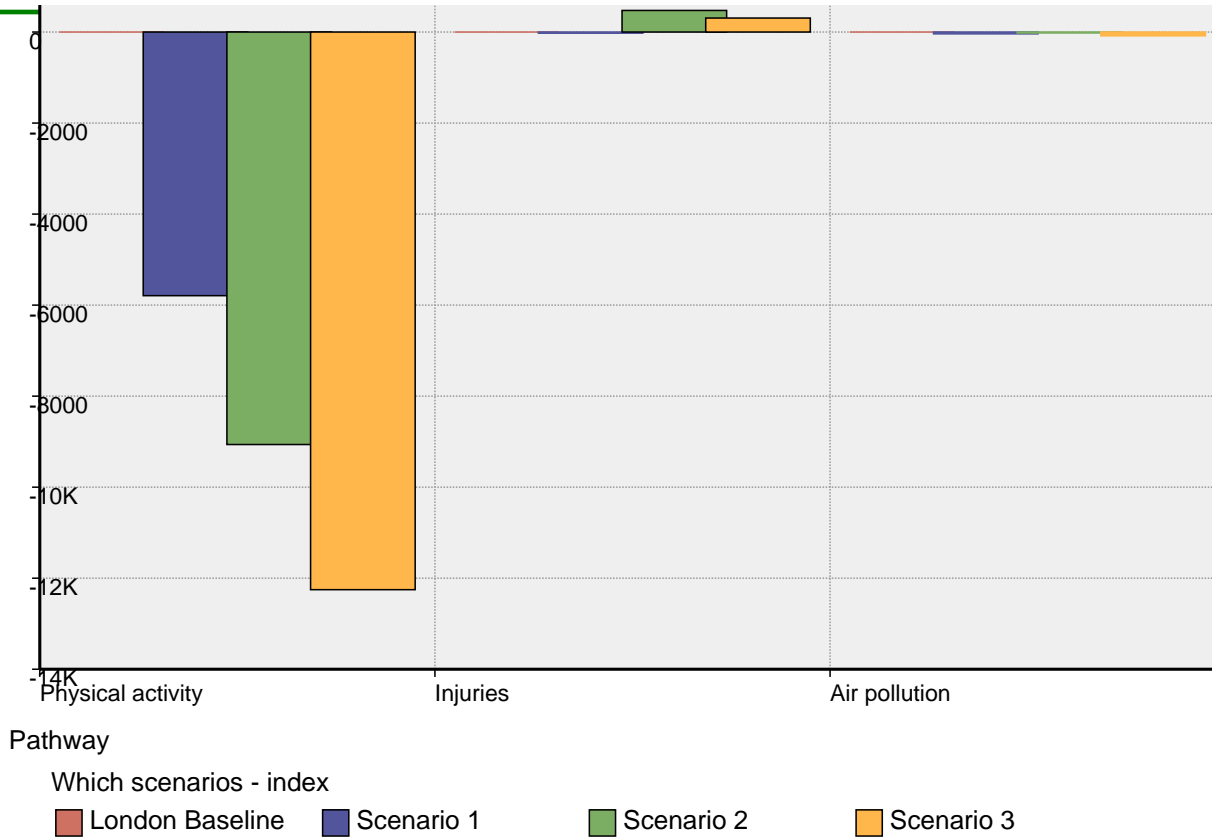
Age group (years)

0-4 5-14 15-29 30-44 45-59 60-69 70-79 80+

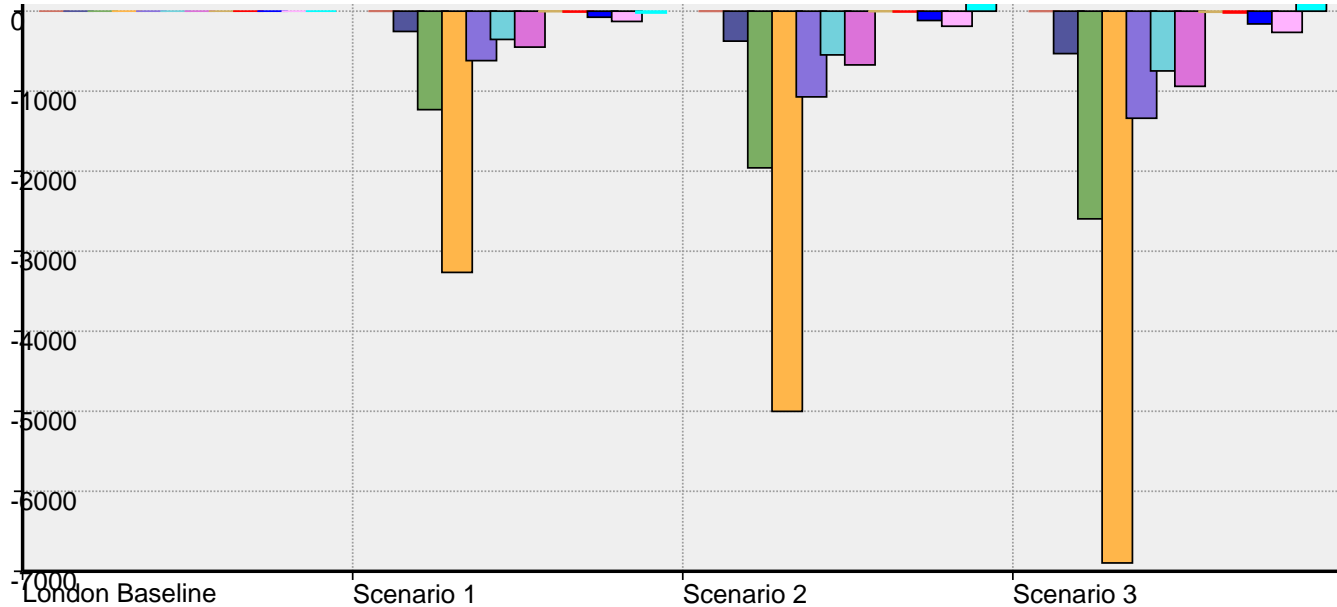
Health: DALY



Health: DALY, male



Health: DALY, male



Which scenarios - index

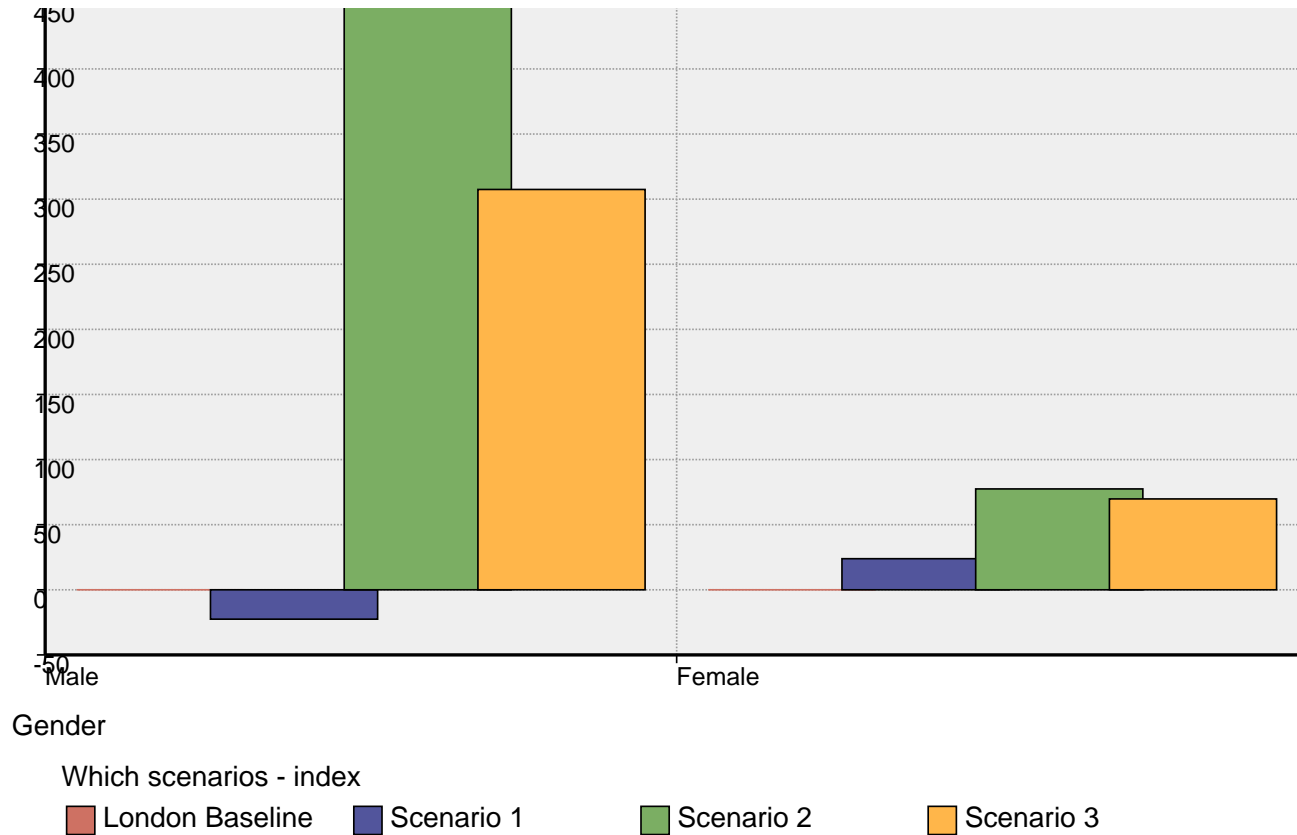
Diseases

- Breast Cancer
- Colon cancer
- Stroke
- IHD

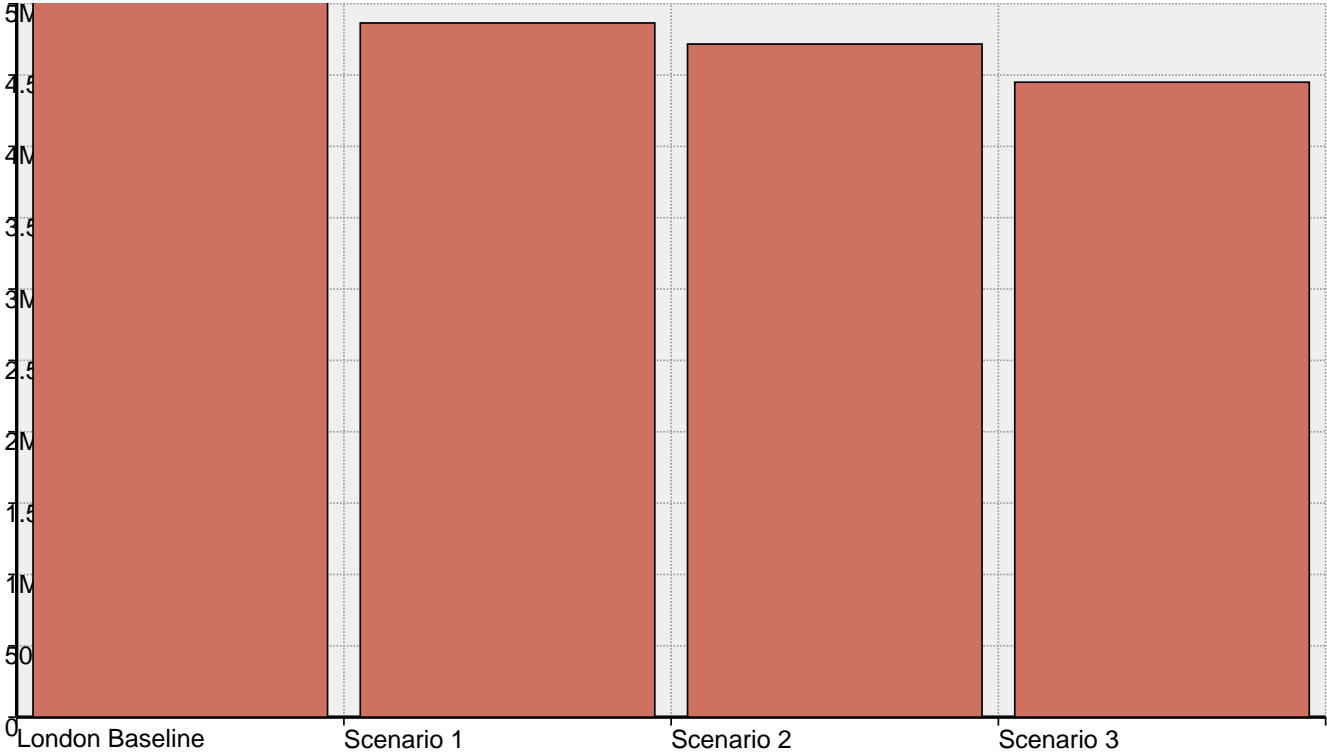
- Dementia
- Depression
- Diabetes
- Lung Cancer

- Respiratory Diseases
- Hypertensive heart disease
- Inflammatory heart disease
- Road traffic injuries

Health: Injuries



CO2 emission from transport



Which scenarios - index