Title: Increasing the health benefits of active transport by network level separation of motorised and active transport modes

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Background
Research shows that exposing cyclists and pedestrians to high speed motorised traffic reduces the health benefits of these active transport modes as a results of an increased crash risk and inhaled air pollution. Moreover, the associated perceived unsafety may decrease the amount of walking and cycling thereby preventing people from taking advantage of the health benefits.

Aim
As bicycle tracks and sidewalks allow for conflicts at intersections and a short distance to the source of air pollutants, this paper explores the opportunities for separation of cyclists and pedestrians from motorised traffic at the network level. Within the context of developed countries, the paper focused at road hierarchies, networks for motorised and active transport, concepts such as filtered permeability and bicycle boulevards, route choice, etc.

Method or methodological issues
The study uses theories and scientific and grey literature from developed countries to explore the opportunities for network level separation of motorists and active transport users. Methodological issues to be discussed in the paper are that a host of measures at locations can contribute to network level separation, that the degree to which cyclists and pedestrians are exposed to high speed motorised traffic within a network is hard to measure, and that the applicability is context dependent. But there are also issues for practitioners such as how to implement a road hierarchy and deal with resistance.

Results obtained or expected
The result is a first estimation of the opportunities for network level separation of active and motorized transport within developed countries and suggestions for future research on the effectiveness of measures to achieve network level separation and its health impact. Most research is focussed at the location level and monodisciplinary. Research on opportunities and effects has to be conducted at or aggregated to the network level. For instance, multi-disciplinary research is needed for the health impact is dependent upon modal shift, road safety, and air pollution.