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The economic appraisal of health benefits of non-motorized transport modes: key methodological challenges

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Abstract

The economic appraisal of the external effects of transport options can provide important data for policy making. On the other hand, impacts of non-motorized modes have often been undervalued in comparison to other transport modes. To this end, assessing the potential health benefits of walking and cycling is being increasingly recognized as an important step to promote sustainable mobility policies.

This paper is built upon the contracted study for the World Health Organization (WHO) on the economic appraisal of health benefits of walking and cycling investments for the City of Viana do Castelo. This Portuguese city which integrates the WHO European Healthy Cities Network provided a suitable policy context for the former application in Portugal of the WHO Health Economic Assessment Model (HEAT) for appraising the health benefits of non-motorized transport. The study comprised the evaluation of the following investment actions: a) Improvements of the urban public space for pedestrians; b) Planning future cycling infrastructures. This paper provides a discussion of the methodological challenges and key findings that have arisen from the WHO HEAT application study, when trying to answer the following questions:

- If x people cycle (or walk) a distance of y kilometers on most days, what is the economic value of the correspondent health benefits?
- What levels of uptake of cycling in the future are required for the cycling plan to be economic viable?
- What health benefits are associated to a projected increase in the traffic levels of pedestrians (% increase from the reference level)?
- Do health benefits of cycling (and walking) investments outweigh their costs?

Results from this study make it able to add novel evidence for the Portuguese urban context on the potential health benefits of walking and cycling (maximum and mean annual health benefits), including the cost-benefit ratio indicators. These indicators are expected to be useful for policy makers and city officers involved in the promotion of sustainable mobility.

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