

Smart Mobility Adoption and Health: a Short Commentary

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Abstract

The aim of this short commentary is briefly indicating some relations between smart mobility and health. Its wide range of benefits surpasses any other transport solution in the current and future transport sphere, especially with innovation and flexibility as transport elements. However, aspects related to regulation, inequalities and policy priorities should be taken into account.

Keywords : Smart mobility; Health; Technology

Introduction

Smart mobility

There are studies showing that over the long term, land use and transportation policies can provide significant health benefits when they are aimed at encouraging sustainable practices and active transport modes use [1,3]. Smart mobility, a significant element of smart cities [6], is becoming an important area in urban planning and policies formulation. Although there is no consensus about the concept of smart mobility, it includes a set of actions backed by sophisticated technologies applied to the mobility sector (intelligent transport systems; open data; big data analysis and citizenship participation) [2,6,7]. It also incorporates planning tools to coordinate a mass transit system, data collections systems, data analysis tools, numerous real-time information systems and public transport stops [4].

In general, the adoption of smart mobility solutions is aimed to facilitate personal daily mobility either on foot, by bicycle or on public or private transport following the goal to reduce the negative economic, environmental and time impacts [10,11].

One of the smart mobility practices includes the design of reliable, accessible, safe and comfortable transport Networks (MaaS). In this sense, smart mobility is not only a technical matter, given that the use of technological devices and services to manage transport systems influences people's quality of life and the public value created for the city as a whole. Hence the importance of stakeholder involvement in the implementation of smart mobility solutions. And those citizens seek and relate to their urban environment in an intelligent and rational way [8]. With regards to the governance aspects, one key element is the interactive and participatory process to commit "citizen" and not just "users" to a "smarter" mobility paradigm.

Smart Mobility and Health

It is known that traffic congestion, accidents and greenhouse gases (GHG) emissions related to transport provoke broad negative impacts in health, especially in big cities. However, simply building more roads will not solve these problems, but also there will be the need to integrate the urban infrastructure through smart connectivity. Thereby, smart mobility adoption can contribute to reducing traffic congestion or accidents, and hence positively influence health. Moreover, smart mobility solutions can affect public health through physical activity levels, exposure to crashes, air pollution and noise, and community interaction [5]. It can also improve public health by benefiting active modes of transport, reducing per capita air pollution and associated respiratory ailments, and lowering the risk of car related accidents. And technological innovations in vehicles can be helpful in reaching greater fuel efficiency; greater safety in cars, and thus can be considered positive on health and safety [9].

Conclusions

To conclude, four ideas are pointed out

Smart mobility solutions could benefit the current mobility model leading it to a more sustainable one, but the absence of adequate regulation could lead to problems like increased transport inequalities. For example, one of the fundamental ideas underlying smart mobility is to create a self-sufficient transport network without a human operator. This technological approach can reduce morbidity and mortality from motor vehicle crashes and may help reshape cities to promote healthy urban environments, but it has to be properly regulated [9].

Planning must prevail over technology in the area of mobility, and the actions should be aimed at organizing modes of transport, including transport on foot, in terms of their importance and significance [2,10].

Adopting the holistic concept of Smart City applied to Mobility, the citizens should be the cornerstone of all actions relating to quality of life and health in the case of mobility solutions. The priority should be supporting non-motorised transport to reduce congestion, promote health and reduce GHG in cities.

Evaluating the links between smart mobility and health requires the creation of assessment tools on how practical, effective and safe the new modes of transport will be for public health.

The future of smart mobility is vast, complex, and involves great uncertainty and challenges. One of its great challenges is that it is unequivocally linked to sustainable mobility as well as health.

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