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Autonomous Vehicles and Public Health

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Abstract

Autonomous vehicles (AVs) have the potential to shape urban life and significantly modify travel behaviors. "Autonomous technology" means technology that can drive a vehicle without active physical control or monitoring by a human operator. The first AV fleets are already in service in US cities. AVs offer a variety of automation, vehicle ownership, and vehicle use options. AVs could increase some health risks (such as air pollution, noise, and sedentarism); however, if proper regulated, AVs will likely reduce morbidity and mortality from motor vehicle crashes and may help reshape cities to promote healthy urban environments. Healthy models of AV use include fully electric vehicles in a system of ridesharing and ridesplitting. Public health will benefit if proper policies and regulatory frameworks are implemented before the complete introduction of AVs into the market.

Keywords: autonomous vehicles, public health, travel behavior, traffic accidents, air pollution, noise exposur

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