

# Transforming Our Cities: Best Practices Towards Clean Air and Active Transportation

Andrew Glazener, Texas A&M University, CARTEEH & Haneen Khreis, Texas A&M Transportation Institute, CARTEEH

## 1. Car-Free Policies



Car-free policies aim to restrict the use of motor vehicles in cities. Some policies ban the use of motor vehicles in certain areas, while others may temporarily close streets so that only pedestrians and cyclists can use them. Other methods to restrict the use of cars include road pricing, environmental zones, and taxation which are meant to disincentivize the use of motor vehicles. The intentions of these policies vary as some are designed to reduce specific pollutants, while others may focus on reducing GHGs or limiting traffic congestion. **Overall benefit to Clean Air and Active Transportation: YES/YES**

## 4. Public Transportation



Public transportation often entails active transportation due to the likelihood that individuals walk or cycle to fulfill the first- and last-mile portions of their travel. A variety of practices and policies in urban areas focus on the physical activity and air quality benefits of improved public transportation provision and utilization. **Overall benefit to Clean Air and Active Transportation: YES/YES**

## 2. Green Space Provision



Green spaces have been associated with physical activity, reductions in air pollution, and overall health benefits. The way cities manage and place green spaces to benefit air quality, physical activity, and active transportation can provide healthy and safe places for transportation and recreation. **Overall benefit to Clean Air and Active Transportation: YES/YES**

## 5. Urban Design Interventions



The built environment is an important influence on active transportation and the resulting physical activity. Urban design interventions address land use policies and infrastructure development and how they influence transportation mode choice, physical activity and air quality. **Overall benefit to Clean Air and Active Transportation: YES/YES**

## 3. Vehicle Technologies



Vehicle technologies can play an important role in improving urban air quality, although there is evidence that the scale of adaptation needs to be wide for benefits to occur. Emergent and disruptive technologies, specifically electric and autonomous vehicles, may make an impact on air quality and active transportation in urban areas. The air quality impact, however, will depend on the development of clean energy production to power these vehicles. **Overall benefit to Clean Air and Active Transportation: YES/NO**

## 6. Integrated Policy Packages

Rank	Measure1	Measure2	Measure3	Measure4	Measure5	Total
1	Urban traffic control	Intelligent transport systems	Road user charging	Promotional activities	Promoting low carbon vehicles	72
2	Development density and mix	Urban traffic control	Road user charging	Land use to support public transport	Promoting low carbon vehicles	72
3	Urban traffic control	Intelligent transport systems	Road user charging	Land use to support public transport	Promoting low carbon vehicles	72
4	Development density and mix	Urban traffic control	Road user charging	Promotional activities	Promoting low carbon vehicles	72
5	Urban traffic control	Intelligent transport systems	Road user charging	Promoting low carbon vehicles	Low emission zones	72
6	Urban traffic control	Regulatory restrictions	Road user charging	Land use to support public transport	Promoting low carbon vehicles	72
7	Urban traffic control	Road user charging	Land use to support public transport	Promoting low carbon vehicles	Low emission zones	72
8	Urban traffic control	Road user charging	Land use to support public transport	Promotional activities	Promoting low carbon vehicles	72
9	Urban traffic control	Regulatory restrictions	Road user charging	Promoting low carbon vehicles	Low emission zones	72
10	Urban traffic control	Regulatory restrictions	Road user charging	Promotional activities	Promoting low carbon vehicles	72
11	Development density and mix	Urban traffic control	Road user charging	Promoting low carbon vehicles	Low emission zones	72
12	Urban traffic control	Intelligent transport systems	Regulatory restrictions	Road user charging	Promoting low carbon vehicles	72
13	Development density and mix	Intelligent transport systems	Road user charging	Promoting low carbon vehicles	Low emission zones	72

By enacting a variety of policies simultaneously such as improved vehicle technologies, restricted vehicle use, improved active and public transportation infrastructure, air pollution and physical inactivity are addressed more holistically and effectively than if they were being addressed with a single policy tool and greater health benefits are expected.