Six reasons why: Compelling co-benefits of lowering speed on our streets

The George Institute for Global Health

Better treatments
Better care
Healthier societies

With a growing global population and increasing urbanisation, cities are facing huge pressures in terms of population density, transport, air quality, access to opportunities for physical activity, and climate change. We urgently need to adopt policies that address these issues and the threats to safety and health they present.

The Stockholm Declaration signed at the 2020 Global Ministerial Conference on Road Safety states that global leaders have a shared responsibility to protect road users from crash forces beyond the limits of human injury tolerance. This requires a focus on safe speeds, including:

- *ZERO SPEEDING:* use of effective speed management approaches, and
- *30 KM/H:* mandating a 30 km/h speed limit in urban areas to prevent serious injuries and deaths to vulnerable road users when human errors occur.

The benefits of lower urban speed limits go well beyond saving lives and reducing injuries from road traffic collisions. This policy brief outlines six compelling co-benefits which support progress towards the Sustainable Development Goals (SDGs):

Co-benefits of a 30km/h speed limit – Multiple inter-related reasons for action

There is growing evidence of the link between lowered urban speed limits and:

- The *prevention of road traffic injuries*, notably to pedestrians and cyclists *(SDG targets 3.6, 11.2)*
- The *promotion of physical activity* through more active transport (walking or cycling) and the prevention of non-communicable diseases (NCDs) as a result *(SDG target 3.4)*
- The *improvement of air quality* and a reduction in related short- and long-term health issues as a result, while also addressing a major contributor to climate change *(SDG targets 3.9, 11.6, 13.2)*
- Increased social *connectivity* and access to goods and services *(SDG target 10.2)*
- Enhanced *equity*, as a result of focusing on the safety and health concerns of the most vulnerable in our communities, and
- *Economic gains* for businesses and governments.

POLICY RECOMMENDATIONS

In addition to setting and enforcing urban speed limits of 30km/h or less, policymakers should consider implementing:

- National policies that prioritise walking and cycling;
- National policies that invest in and promote public transport as an alternative to private vehicles;
- National and sub-national policies that encourage planning of liveable urban spaces;
- Education programmes and social marketing to increase public demand for safer speeds;
- Monitoring and evaluation of the impact of walking and cycling policies.

"Reducing vehicle speeds, particularly in urban areas, impacts so much more than just road safety. It encourages people to walk and cycle as roads are safer, the air is cleaner, and they are accessible options. Increasing active transport also has the potential to drive down obesity levels, with an impact on many related, non-communicable diseases."

Dr Margie Peden
Head of the Global Injury Programme,
The George Institute for Global Health

1. Safety

Globally, road traffic crashes kill 1.35 million people every year and are responsible for over 50 million more non-fatal injuries. Ninety per cent of these deaths and injuries occur in low- and middle-income countries (LMICs). Pedestrian and cyclist fatalities make up 26% of the global road death toll, with 45% of these fatalities occurring in LMICs.

Despite the importance of speed as a major cause of death and serious injury, the Global Status Report on Road Safety (2018) showed that:

- *Only 46 of the 169 countries with national speed laws have laws in line with best practice in speed management.*
- *Only 84 of 175 countries participating in the report allow local authorities to reduce speeds where appropriate (for example, around schools or hospitals).*

There is growing evidence of the link between lowered urban speed limits and the prevention of road traffic injuries, notably to pedestrians and cyclists (SDG target 3.6). The introduction of 30km/h zones and speed limits in urban areas, where vulnerable road users (pedestrians and cyclists) and vehicles regularly share the same space, has been found to effectively reduce fatalities and injuries. The chances of survival diminish rapidly at speeds greater than 30km/h when a pedestrian is hit by a vehicle. Pedestrians and cyclists are three times more likely to be fatally injured if struck by a vehicle travelling between 30-45km/h than under 30km, and eight times more likely if vehicles are travelling at 50 km/h or beyond.

The Slow Zones, Safe Zones project in Vietnam has adopted a multi-pronged approach to reduce speed near schools – find out more here.

2. Physical Activity

Barriers to walking and cycling within a city include perceived and real threats to safety, as well as concerns about exposure to air pollution. Reducing vehicle speed is an important component of addressing these barriers. Lower speeds result in a greater proportion of vehicles yielding to pedestrians and make for more pleasant streets, which encourage walking, cycling and outdoor play. Evidence from cities in high-income countries (HICs) shows that lower vehicle speeds are associated with increased walking and cycling activity in these areas.

People living in 'walkable' environments are more likely to engage in active transport and higher levels of physical activity. The introduction of policies that create 'pleasant neighbourhoods' via more pedestrian- or cyclist-friendly streets can reduce the prevalence of non-communicable diseases (NCDs), for which physical inactivity is a key risk factor (and so strengthen progress towards SDG target 3.4). Health gains associated with increased physical activity are seen with even small increases in activity, particularly among those who are least active. Governments in HICs as well as LMICs are increasingly developing policies to promote walking, biking and the use of public transport as part of a larger strategy to tackle NCDs and mental health.

"Safe speed is at the heart of a safe-system approach to road safety. In areas shared with pedestrians and cyclists, a safe speed limit of 30km/h or less ensures the safety of everyone using that area. The risk of a pedestrian dying after being struck by a car increases threefold at impact speeds over 30km/h, and by more than eight times at impact speeds over 50km/h."

Associate Professor Julie Brown
Program Head, Injury Division,
The George Institute for Global Health, Australia

3. Air Quality

Transport is a significant and growing contributor to urban air pollution in LMIC as well as HIC cities, with emissions more than doubling since 1970 to 2010, with about 80% of this increase coming from road vehicles. Urban traffic is a major source of pollutants such as carbon monoxide, carbon dioxide, nitrogen oxides and particulate matter. The release of such greenhouse gases and pollutants is contributing to the global warming of the Earth's atmosphere, and to climate change (counter to SDG13 which outlines targets to 'take urgent action to combat climate change and its impacts'). There is ample evidence

that these air pollutants have both short- and long-term adverse health effects, including serious impairment to lung function and links with chronic respiratory disease and other major NCDs.

While some research shows constant speeds of 30 km/h can use more fuel or emit more significant greenhouse gases than constant speeds of 50 km/h this seems not to be the case with 'stop start' traffic. In areas of congestion, and high numbers of intersections or junctions, 30km/h limits show fuel savings compared with 50km/h limits.

Policies that encourage lower urban speeds and fewer vehicles in high-pedestrian areas reduce air pollutants, with immediate and long-term health gains (in line with SDG target 3.9). Such policies can also encourage walking and cycling, and mitigate some of the negative effects of climate change (SDG target 11.6). A Welsh study, following a change of urban speed limits from ~30mp/h zones to ~20mp/h, estimated an overall reduction in deaths related to air pollution.

4. Connectivity and Access

Creating more pedestrian- and cyclist-friendly urban streets improves access to daily destinations including schools, grocery stores, medical services, parks and green spaces, public land, recreation and employment opportunities. These policies can improve the liveability of cities and enhance quality of life.

Progressive urban planning combines the benefits of active transport and accessibility in the "15-minute city" concept. Such urban centres are designed or remodelled to enable all inhabitants to get from their home to their workplace to recreation spaces within a travel time of a quarter of an hour by cycling, walking or public transport. The gains include improvements to both quality of air (through limiting personal car use) and life (including through reduced commuting time, safer travel routes, and a focus on equitable access to essential amenities). Also described as 'complete neighbourhoods', this model is being considered as a means to support broader economic recovery following COVID-19, with Paris and Milan both adopting this approach as part of a recovery framework.

Paris to become a '15-minute city'

Mayor Anne Hidalgo plans to make Paris a '15-minute city' – remodelling it so that residents can reach their places of work, shops and recreation venues from their homes within 15 minutes. This will entail "deconstructing the city" in order to mix neighbourhoods with homes, offices, health centres, bars, schools and recreational spaces. More of the roads will be used for pedestrians and cyclists, and open spaces will have multiples uses, e.g. a school playground during the day could become a sports facility for adults at night. Barcelona, London, Melbourne and Oregon have begun to implement similar pilot projects, although there has been some criticism that these plans are not inclusive enough.

Find out more here

'15-minute city': major remodelling plans for French capital

5. Equity

Removing barriers to access to services and increasing the safety and attractiveness of local streets to those who are most likely to use active forms of transport can help address inequities in health. Indeed, there is growing evidence of the link between lowered urban speed limits and increased social connectivity and access to goods and services (supporting progress towards SDG target 10.2). In low- to middle-income countries, active transport such as walking or cycling is typically the only transportation option for the most vulnerable people in a population (e.g. lower-income communities, the elderly, children and people with mobility impairment).

Providing affordable and convenient transport options can promote more equitable opportunities within and between communities. By simultaneously promoting

walkability and bicycle-friendly streets to enhance access to services, grocery stores and green space, while reducing injury risk and air pollutants, governments can improve the health of the most vulnerable in a community including children, older people, people with disabilities and people experiencing poverty.

Lower speeds in urban areas have been found to help reduce the number of all pedestrian collisions.

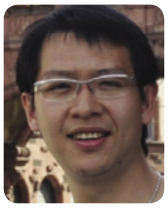
"Transportation is a health equity issue. Upstream it determines where we choose to live, study and work, our ability to walk and engage in recreational activities. Equally, it influences our capacity to access health services. Transport systems that are built for the most disadvantaged, most vulnerable are also the safest."

Dr Jagnoor Jagnoor
Senior Research Fellow, Injury Program,
The George Institute for Global Health

6. Economic benefits

Encouraging walking and cycling in congested cities can increase the local footfall for businesses and thus increase revenue. Local merchants and services can benefit from increased business made possible through greater connectivity and access, while reduced vehicle speeds help increase retail activities for local businesses. There are further economic gains associated with having shops and services on 'pleasant streets' rather than streets which focus on 'through traffic'.

In addition to the obvious pain and suffering experienced by preventable deaths due to injuries and NCDs, these health problems have a large financial burden, particularly on LMICs. Evidence from studies in multiple cities in HICs indicates that lower vehicle speeds reduce the costs associated with crashes, including health care costs, property damage, lost earnings, and legal costs. Employers and businesses also benefit economically from reduced crashes due to lower urban speed limits. These savings include fewer lost days due to injury, reduced instances of vehicle repair, and fuel savings.



"The cost of preventable road traffic injuries to human life is tragically large around the world. The preventative gains of lowering urban speed limits are evident, but what is often overlooked is the strong business case for such policies that create a safer urban environment. Employers and businesses can also reap the rewards of reductions in crash-related costs (health, legal, property)."

Dr Maoyi Tian
Senior Research Fellow, The George Institute, China

Streets for Life
#Love30

'Streets for Life: #Love30' is the focus of the 6th United Nations Road Safety Awareness Week (17–23 May 2021).

Evidence shows that low-speed streets save lives and are the heart of any community. 30 km/h (~20 mph) speed limits, in areas where people and traffic mix, make for streets that are healthy, green, and liveable. They are 'streets for life'. The campaign calls on policymakers to act for low-speed streets across cities, towns, and villages worldwide.

About The George Institute for Global Health

The George Institute for Global Health is focused on generating robust evidence to create better treatments, better care and healthier societies. This means not only generating evidence to determine what works, and doesn't work, but also which health service or treatment is value for money and where the cost of healthcare can be reduced. Paramount to our work is finding new ways to fund healthcare so health systems can become more sustainable, as well as operate more equitably.