SUSTAINABLE TRANSPORT AND URBAN HEALTH: Lessons from Latin American Cities

Latin America is highly urbanized and unequal with serious urban health and sustainability challenges. 19 of the world’s 30 most unequal cities are in Latin America and > 80% of the population lives in urban areas.

Latin America’s innovative urban transportation policies, technologies, and interventions have delivered important mobility and accessibility benefits and improved health and wellbeing. This experience can inspire policy change in other cities around the world.

Why is Learning About Mobility Policies in Latin American Cities Important?

- It offers lessons on how to implement effective policies, technologies and interventions
- Other developing countries may follow the same pathway of rapid urbanization in limited resource settings
- Latin America is a major hub for innovation in urban transport and mobility policies that promote efficiency, prioritize people over vehicles and reduce spatial and social segregation.
Glossary

**Sustainable transport:** The provision of services and infrastructure for residents and visitors to access destinations in a manner that is safe, affordable, efficient, inclusive and resilient, while minimizing environmental impacts for current and future generations.¹

**Active transport:** Any type of human-powered transportation, including walking and cycling.²

**Urban health:** The description of the health of urban populations as a whole and as particular subgroups as well as the understanding of the determinants of population health in cities.³

**Ciclovía Recreativa:** Open Streets. Multi-sectoral programs in which streets are closed to motorized vehicles and open for individuals for leisure activities.⁴

**BRT:** Bus-Rapid-Transit. Bus-based transit system that may include dedicated lanes, traffic signal priority, off-board fare collection, elevated platforms and enhanced stations.⁵

**Aerial trams:** Transport lift systems integrated into the city’s public transport network that provide mobility options for those living in hillside neighborhoods.⁶

**Transportation demand management policies:** Policies and measures that reduce excessive demand of transport services and infrastructure.⁷ Examples include vehicle restrictions, carpooling, working remotely, parking pricing and regulations, congestion pricing⁷, and Ley Pro-Bici.⁸

**Mobility:** The time and costs required for travel. Mobility is higher when average travel times, variations in travel times, and travel costs are low.⁹

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**Innovative Transportation Policies and Interventions in Latin American Cities:**

**Beyond Traditional Systems**

- **BRT:** 1,912 km in 67 cities in 13 countries
- **AERIAL TRAM:** 47 km in 7 cities in 4 countries
- **BICYCLE FACILITIES:** 3,486 km in 51 cities in 10 countries
- **CICLOVIAS RECREATIVAS:** at least 800 km in 457 cities in 16 countries
- **METRO/SUBWAY/LIGHT RAIL:** 1,041 km in 19 cities in 7 countries

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The decisions cities make about transport affect health and health behaviors in many different ways¹⁰
Opportunities and challenges for effective implementation of sustainable transport policies

**Opportunities**

- Connectivity between transportation modes can enhance the travel experience and lead to improved outcomes for sustainability and health.

- Investments in sustainable transportation offer more than solely easier mobility: they can usher in myriad social, health and economic benefits, as demonstrated by the Latin American experience.

- The financial outlook for innovation in sustainable transportation can be made both more attractive and more accurate by accounting for the wide range of benefits and cost savings such interventions bring about.

- Better enabling various publics to participate in the conceptualization, design, planning and implementation of transportation projects will improve both quality, and the equitable distribution of benefits.

- The successes and failures of transportation policies and interventions offer critical opportunities to fine-tune approaches, redirect efforts, and improve projects. High-quality data and rigorous evaluation allow for better understanding of whether projects and policies are having their intended effects.

- Strong political leadership and a highly competent mid-level staff body allow for the effective implementation of transportation innovations. A solid staff also strengthens the project against attacks from detractors and those unfamiliar with new and innovative policies and projects, and provides continuity when elected officials transition.

**Challenges**

- Pedestrian and cyclists are often after-thoughts in the planning for transportation options.

- Funding is often lacking for innovations. This is partly due to limited city and national budgets, and often reinforced by the pervasive view that public transportation modes must cover their operating costs.

- Evaluating, quantifying, and accounting for the broader impacts of sustainable mobility interventions requires the cultivation of alliances across sectors (e.g., health, transport, urban planning).

- Planning and implementation in innovative transportation projects is frequently top-down, sometimes with unequal and undesirable impacts on marginalized populations.

- The public health sector has rarely participated strongly in decision-making for transportation policy, despite the linked impacts of mobility on health.

- Transportation projects are rarely evaluated after implementation, limiting potential learning. Continuous, disaggregated data collection in partnership with non-profit, academic, and multi-lateral organizations can be critical in supporting policy and project evaluations.

- Public demand for a long-term perspective can spur effective political and institutional action, but is often lacking. Good data and appropriate dissemination mechanisms can help elicit this demand, as can the empowerment of municipal and community politicians, who are naturally close to their constituents.
**Sustainable Transportation Case study:**

*Ciclovías Recreativas have gained popularity in every continent*¹¹

Ciclovía programs were created in Latin America to promote recreation, health behaviors and sustainable transportation. The experience of the Ciclovía of Bogotá offers valuable lessons for bringing innovations in transportation to a global audience:⁴¹¹

- Colombian officials (champions) have travelled the world to speak about Bogotá’s urban transformation and the success of the Ciclovía.
- The creation of a transnational network of sustainable transportation and public health that have become advocates of Ciclovía as a way to promote physical activity.
- A network of Ciclovía experts that shared technical and administrative details needed to organize an event in other contexts.
- South-south exchange (e.g., sister cities) encourages adoption of the Ciclovía model in similar socioeconomic environments in different parts of the world.
- Dissemination of both scientific evidence and compelling narratives of the success of the Ciclovía model to policymakers and the public (e.g., Laws like Obesity Law and Pro-bici law).
- New social media platforms enable easy sharing of photos and videos of the Bogotá Ciclovía, raising awareness worldwide.
- Interaction between transportation, recreation, and health sectors to promote sustainable transportation and health behaviors.

### Countries with Ciclovíases
## Successes and Challenges of BRT and Aerial Trams in LAC

### BRT

<table>
<thead>
<tr>
<th>Information</th>
<th>Aerial Trams</th>
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<tbody>
<tr>
<td><strong>TransMilenio</strong></td>
<td><strong>Metrobus</strong></td>
</tr>
<tr>
<td>• Bogotá</td>
<td>• Mexico City</td>
</tr>
<tr>
<td>• Inaugurated in 2000</td>
<td>• Inaugurated in 2005</td>
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<tr>
<td>• Currently 113km</td>
<td>• Currently 105 km</td>
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<tr>
<td>• 2.3 million daily trips</td>
<td>• 0.9 million trips per day</td>
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<table>
<thead>
<tr>
<th>Successes</th>
<th>Aerial Trams</th>
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<tbody>
<tr>
<td>• Physical activity promotion (12 minutes more of physical activity among users vs. nonusers) 12</td>
<td>• Reduction in spatial segregation 22</td>
</tr>
<tr>
<td>• Travel time savings</td>
<td>• Fewer homicides (66% greater reduction in neighborhoods with Metrocable vs. without) 23</td>
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<tr>
<td>• Permanent stations</td>
<td>• More reliance on the police</td>
</tr>
<tr>
<td>• Increased property values by 1-10% 13-15</td>
<td>• Increment of collective efficacy</td>
</tr>
<tr>
<td>• Decreased crashes 16</td>
<td>• Travel time savings 26</td>
</tr>
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<tr>
<th>Challenges</th>
<th>Aerial Trams</th>
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<tbody>
<tr>
<td>• Overcrowding</td>
<td>• Long waiting time at stations 25</td>
</tr>
<tr>
<td>• Users exposed to pollutant concentrations up to 6 times higher than pedestrians and cyclists 17</td>
<td>• High fares 25</td>
</tr>
<tr>
<td>• Petty theft</td>
<td>• Difficult to expand to other areas of the city due to costs 24</td>
</tr>
<tr>
<td>• Requires operating subsidies</td>
<td>• Unreliable service 27</td>
</tr>
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### Aerial Trams

<table>
<thead>
<tr>
<th>Metrocable</th>
<th>Teleférico do Alemão</th>
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<tbody>
<tr>
<td>• Medellín</td>
<td>• Rio de Janeiro</td>
</tr>
<tr>
<td>• Inaugurated in 2004</td>
<td>• Inaugurated in 2011</td>
</tr>
<tr>
<td>• Five lines (1.4 km -4.6km)</td>
<td>• Line Length 3.5 Km</td>
</tr>
<tr>
<td>• 1 -20 thousand passengers per day</td>
<td>• 12 thousand passengers per day</td>
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### Acknowledgements

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REFERENCES:


8. Congreso de la República de Colombia. Ley 1811 por la cual se otorgan incentivos para promover el uso de la bicicleta en el territorio nacional y se modifica el código nacional de tránsito. (2016).


