THE POWER OF CITIES:

TACKLING NONCOMMUNICABLE DISEASES AND ROAD TRAFFIC INJURIES

World Health Organization

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Introduction

—— Why cities matter to global health

"Healthy cities make for healthy countries."

Héctor López Santillana
Mayor of León

Cities are energetic hubs of creativity and power, learning and culture. They are ecosystems that support growth and change, and are now home to more than half of the world's population – a proportion expected reach two thirds by 2050 *(1)*.

The World Health Organization (WHO) has identified urbanization as one of the key challenges for public health in the 21st century *(2)*. It is typically discussed in negative terms, including infectious outbreaks, unhealthy lifestyles and environmental threats. Yet cities offer significant opportunities to improve public health through health-enhancing policies and actions *(3, 4)*.

National ministries generally assume responsibility for promoting a country's health and well-being, but city leaders are key allies in delivering national public health objectives among large parts of the population. City leaders have the means, opportunity and obligation to protect the health and well-being of their people by defining priorities, uniting stakeholders around common goals, and ensuring accountability for outcomes.

City leaders' commitment is important not just for the health of cities, but for global health as a whole. Sustainable Development Goal (SDG) 11 explicitly commits the world to "Mak[ing] cities inclusive, safe, resilient and sustainable" places to live *(5)*. But their contribution to Goal 3, "Ensure healthy lives and promote well-being for all at all ages", is also fundamental *(6)*. Cities are the main implementation sites for national health policies and programmes – without their support, global targets are unlikely to be achieved.

This report is a call for city leaders to rise to the challenge and show the world how local action can help solve global health problems. ●

A city park in Tianjin, China.
Photo credit: Yang Aijun / World Bank.

Addressing the challenge of NCDs and road safety requires national and city authorities to work closely together.

NCDs and Road Safety in the Sustainable Development Goals

Cities can work to support the global commitment to ensure access to safe, nutritious and sufficient food for all people, especially the poor and ending all forms of malnutrition including overweight and obesity.

Major targets are to reduce the number of deaths from NCDs by a third by 2030 (3.4), and to halve the number of deaths from road traffic crashes by 2020 (3.6). Cities can help countries achieve meaningful reductions in mortality by implementing and enforcing effective policies.

Cities can encourage better urban planning to prioritize increased access to safe systems, improve access to green or public spaces, and improve air quality. Together these will support efforts to reduce road traffic deaths, improve air quality and promote physical activity.

Public health in cities: the scale of the challenge

Cities face myriad public health challenges: sanitation, air pollution, urban violence, road safety, and access to healthy food and spaces. This report is focused on two of the biggest issues facing urban health: noncommunicable diseases (NCDs) and road traffic injuries.

NCDs, which include cancers, diabetes, cardiovascular disease and chronic respiratory diseases, kill 41 million people globally each year and account for 71% of all deaths *(7)*. They are increasingly recognized as conditions whose development is affected by social, economic and environmental determinants, and are often driven by aspects of urbanization *(8, 9)*. Major risk factors include tobacco use, unhealthy diet, physical inactivity and the harmful use of alcohol. In 2018, air pollution was also recognized as an NCD risk factor *(10)*. Cumulatively, the anticipated economic toll of NCDs for low-, middle- and high-income countries was forecast to reach over US$ 30 trillion by 2030 *(11)*.

Meanwhile, road traffic crashes kill another 1.35 million people each year and are the leading cause of death for people aged 5–29 years *(12)*. Road traffic crashes also represent a significant economic burden: they cost most countries an average of 3% of GDP, and for low- and middle-income countries this can sometimes be higher *(13)*.

These health and economic burdens are preventable through action at the city level. Risk factors for NCDs and road traffic injuries are influenced by the urban environment. By choosing the right policies and programmes, local authorities can create a city environment that supports better health outcomes *(6)*.

Successful action on NCDs and road traffic injuries requires multisectoral policy collaboration across a range of sectors, including health, transport, housing and education. Cities are well placed to promote this kind of collaboration, sometimes referred to as a "health in all policies approach" *(14,15)*. Box 1 below outlines how WHO has historically supported these issues through its Healthy Cities networks. ●

80% of all deaths worldwide are attributed to noncommunicable diseases (NCDs) and injuries.

Figure 1: Probability of dying from the four main noncommunicable diseases between the ages of 30 and 70 years, comparable estimates, 2016

Legend:
- ≤14
- 15-18
- 19-21
- 22-24
- ≥25
- Not available
- Not applicable
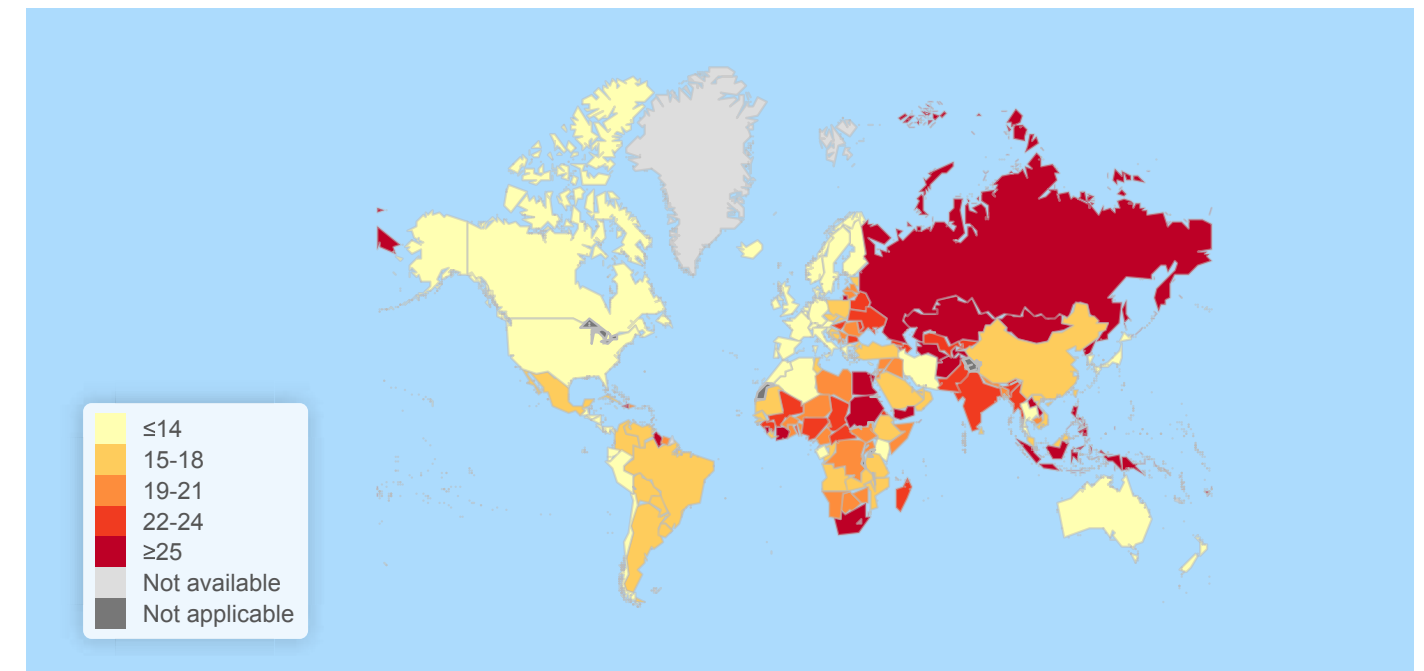
Source: WHO Global Health Observatory.

The World Health Organization's Healthy Cities Programme

The first WHO Healthy Cities Programme began in 1986. Today, each of the six WHO regions has a dedicated Healthy Cities network that helps build a strong movement for public health at city level, addressing issues such as the determinants of health; equity; participatory governance; and intersectoral collaboration.

In addition to the core Healthy Cities networks, many other networks and initiatives have since been established by WHO to provide topic-specific technical support as requested by cities to help them achieve their public health goals.

City-level action also represents an important contribution to the **WHO Thirteenth General Programme of Work (GPW) 2019–2023** *(16)*. Within the GPW, mayors and local leaders are explicitly mentioned as key actors to achieve the WHO goal of helping one billion people become healthier by 2023, which includes protecting them from NCDs.

The power of cities

Addressing NCDs and road traffic injuries requires national and city leaders to work closely together. While each has strengths that can support the work of the other and contribute to better results overall, cities have particular strengths when it comes to the following:

Community engagement.

City leaders are close to the people they serve, which tends to increase public demand for action and accountability. This puts city leaders in a strong position to understand the needs of inhabitants, and to engage communities in service design and delivery.

Local partnerships.

Municipal authorities often have strong partnerships with local stakeholders such as community groups or local organizations, many of whom are already involved in delivering frontline services. These can support effective multisectoral action.

Agility.

City agencies can often act more quickly than national bodies. Unlike national ministers of health, city leaders often have a mandate over multiple government sectors. Because they have greater freedom to link health programmes with other programmes or policies, they can influence cross-sectoral change more easily than national governments.

Children travelling on scooters.
Photo credit: shutterstock.com.

Public Assets.

Municipal authorities own infrastructure such as public spaces, buildings and other assets and can use them to ensure that they support health. For example, temporary or permanent spaces can be used to promote healthy behaviours, such as traffic-free zones, safe bicycle lanes, green markets, and parks and recreation areas. Local zoning regulations can also be used to mandate, incentivize or prohibit specific private property uses to deter unhealthy activities.

Leadership.

City leaders can implement and enforce laws and regulations that enhance national initiatives. They may be able to develop policies further than is possible using national legislation, or test new interventions to determine how they might be scaled up. City leaders can also determine priorities and set a vision or strategy that aligns different city agencies to common objectives, and influence budget allocations to support implementation.

Innovation.

Cities can create enabling environments to test new ideas and approaches, and can also take the lead in piloting such innovations for national authorities. Occasionally this can result in programmes championed by cities being adopted and expanded in regional or national practice.

Peer-to-peer learning.

Striving to achieve goals shared with other cities provides opportunities for intercity diplomacy. Formal or informal relationships and networks between cities, either national or international, can provide support for mutual learning and sharing, healthy competition, and a push to global excellence and leadership.

The goal of this report is to help city leaders identify at least one area which could be changed for the better.

The purpose of this report

This report looks at some of the specific areas where city authorities can take action to prevent NCDs and improve road safety. It focuses on a set of 10 intervention areas that are seen as starting points to show that action is possible.

Many good resources for implementing city-level interventions for NCDs and road traffic injuries already exist. The report identifies a representative selection of these to help city authorities access existing technical tools and guidance that can support their work. However, in practice there is significant variation in how policies are implemented. Actions will be affected by multiple factors relating to political, legislative or fiscal autonomy, sociodemographic trends, and sociocultural preferences, and projects do not always evolve in a continuous, systematic way *(17)*. The report therefore looks at elements that can affect an intervention's success by drawing on insights from real-world experiences in 19 cities, 15 of which are in low- and middle-income countries.

A cyclist travels around the city of Fortaleza.
Photo credit: City of Fortaleza/Vital Strategies.

Ten intervention areas have been identified as a sample set of what cities can do to tackle NCDs and road safety.

The perspectives offered by these experiences are particularly important because they reflect current trends in NCD and road traffic injury mortality and in urban demography. About 85% of premature adult NCD deaths (among those aged 30–70 years) occur in low- and middle-income countries *(7)*, as do 93% of road traffic crashes *(18)*. At the same time, of the world's 10 largest cities, seven are in countries that are not classified as high-income *(19)*.

Overall, this report reflects two important lessons. First, that there are many opportunities to address NCDs and road traffic injuries at the city level, and second, that there is significant variation in how this is achieved. The analysis is designed to help municipal authorities benefit from the learnings of other cities and use these to inform their own future actions.

Ultimately, city leaders will decide which areas of work are most important to improve the health and well-being of their citizens. The goal of this report is to help all city leaders identify at least one intervention from these areas that could benefit their city, and to give them the impetus and tools to take action. ●

Ten interventions to address NCDs and road traffic injuries in cities

Priority Areas

At the 9th Global Conference of Health Promotion in Shanghai in 2016, the Healthy City Mayors Forum – comprised of more than 100 mayors from around the world – committed to promote a number of areas relevant to NCDs and road safety (20). They included:

1 Eliminating pollution emissions and ensuring clean energy and air.

2 Designing cities to promote sustainable urban mobility, including active transport (such as walking or cycling) and recreation, robust urban transport infrastructure, and strong road safety laws.

3 Implementing sustainable and safe food policies that reduce intake of sugars and salt, and reduce harmful use of alcohol.
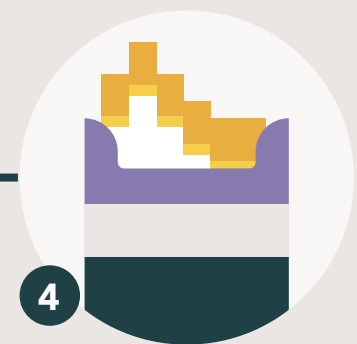
4 Making all environments smoke-free, as well as banning all forms of tobacco advertising, promotion and sponsorship.

Within these areas, there are many actions that cities can take to protect and improve people's health. They can implement, enforce and monitor new policies or update old ones, create new services or improve existing ones, or redesign and add public spaces to promote healthy behaviours and surroundings. They can also stimulate action by the private sector though mandating, incentivizing, allowing, guiding or removing impediments to activities that directly or indirectly promote health (21).

WHO has many resources for NCDs and road safety that are designed for use at the national level, and a number of these contain guidance or tools that could help cities address these issues. WHO guidance is recognized as focusing on evidence-based and high-impact areas, with cost-effectiveness considered where possible.

Getting started

This report identifies 10 interventions that cities can implement, focusing on tobacco control, food policy, physical activity, air quality and road safety, as well as NCD surveillance to support the collection of data on risk factors. There are numerous other ways to improve health within cities, but this small subset of interventions was selected as a starting point based on WHO's existing expertise and evidence for these intervention areas.

The interventions are also based on cost-effective policies. Many have been selected from the WHO Best Buys for NCD control – a set of core policies projected to have the greatest impact on reducing illness, disability and premature death from NCDs (22). The Best Buys have been shown to hold significant economic benefits for low- and lower-middle-income countries, with an estimated gain of US$ 350 billion by 2030 (23). Almost all of the interventions have already been used by cities under the Partnership for Healthy Cities initiative (24) (see Box 2).

The 10 interventions demonstrate how certain activities can be carried out effectively at city level. Some interventions support multiple health outcomes. For example, promoting active transport such as walking and cycling may have positive implications for air quality in an area, and may also contribute to reducing traffic in a particular zone. The list is by no means exhaustive. Many other examples of possible interventions and approaches also exist and can be found in the additional WHO resources listed at the end of each topic. ●

The Partnership for Healthy Cities

The Partnership for Healthy Cities is a joint initiative between WHO, Bloomberg Philanthropies and implementing partner Vital Strategies. It was established in 2017 to help cities around the world tackle NCDs and injuries using evidence-informed policies and interventions. By the end of 2018 there were more than 50 participating cities on six continents. It represents the largest network dedicated to NCDs and injuries in the world.

The concept stems in part from the experiences of the WHO Global Ambassador for NCDs and Injuries, Michael R. Bloomberg. In his role as Mayor of New York City from 2002–2013, the city worked to reduce various risk factors for NCDs and road traffic injuries. Policies included banning smoking in workplaces including all bars and restaurants, as well as in public places such as parks; setting targets for salt content in certain foods; and mandating many restaurants to label calorie content on menus. During his term in office, the average life expectancy in New York City increased by 3 years.

10 interventions

MONITOR NCD RISK FACTORS
Conduct a population-based survey of behavioral risk factors for NCDs, such as tobacco use, alcohol consumption, dietary habits and physical activity.

CREATE A SMOKE-FREE CITY
Protect people from second-hand smoke through the introduction, passage and enforcement of legislation that makes all indoor public places 100% smoke-free.

BAN TOBACCO ADVERTISING
Comprehensive bans on all forms of direct and indirect tobacco advertising, promotion and sponsorship.

REDUCE THE CONSUMPTION OF SUGAR-SWEETENED BEVERAGES
Establish and implement policies to reduce sugar-sweetened beverage consumption, such as taxes on the production or sale of sugar-sweetened beverages.

REDUCE SALT CONSUMPTION
Implement key components of the evidence-based WHO SHAKE package for salt reduction *(34)*.

CREATE WALKABLE, BIKEABLE, LIVABLE STREETS
Improve pedestrian and bicycle networks and infrastructure across the city to ensure safe and equitable access to services, and to promote more walking and cycling for recreation and transport.

CLEANER AIR
Reduce ambient air pollution through interventions in polluting sectors, such as in transport, solid waste, and industries, and promote cleaner indoor air through access to cleaner fuels and technologies for cooking, heating and lighting.

REDUCE DRINK-DRIVING
Increase enforcement of drink-driving laws.

SPEED MANAGEMENT
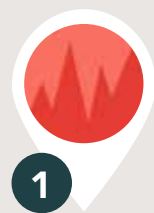Establish lower speed limits and strengthen existing speed-limit enforcement.

INCREASE SEAT-BELT AND HELMET USE
Increase enforcement of seat-belt and motorcycle helmet use.

Ten ways

to tackle NCDs and road traffic injuries in cities

NCD SURVEILLANCE

Conduct a population-based survey of behavioral risk factors for NCDs, such as tobacco use, alcohol consumption, dietary habits and physical activity.

WHY IT MATTERS: Better understanding of the current status of these risk factors can identify which behaviours are most in need of changing to improve overall health. Monitoring risk factors also helps design interventions that are likely to have greater impact – for example, more robust surveys that are able to accurately assess risk factor status at the sub-population and neighbourhood levels can help identify specific areas and groups in greatest need (25).

WHAT A CITY CAN DO: Conduct a comprehensive NCD risk factor survey every 3–5 years, disaggregating data for categories such as age, sex, socioeconomic status, ethnicity and neighbourhood.

1

MONITOR NCD RISK FACTORS

An example can be found in the **WHO STEPwise approach to surveillance (STEPS)** (26)

TOBACCO CONTROL
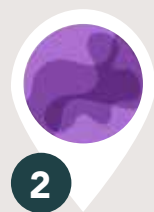
Protect people from second-hand smoke through the introduction, passage and enforcement of legislation that makes all indoor public places 100% smoke-free.

WHY IT MATTERS: Smoke-free spaces protect the health of smokers as well as non-smokers, and encourage cessation because they leave fewer places for people to use tobacco (27). They also help change the social context for smoking, making it more likely that people will not use tobacco (27).

WHAT A CITY CAN DO: Establish and enforce smoke-free places in all public places, including workplaces such as restaurants and bars.
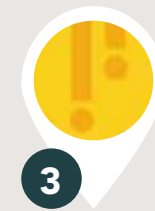
2

CREATE A SMOKE-FREE CITY

Comprehensive bans on all forms of direct and indirect tobacco advertising, promotion and sponsorship.

WHY IT MATTERS: Preventing exposure to tobacco marketing prevents use of tobacco products, especially by young people (28).

WHAT A CITY CAN DO: Even when country laws restrict local action in this area, cities have many options to restrict and enforce tobacco marketing, including through local zoning ordinances and point-of-sale restrictions. For example, prohibiting tobacco sales in the vicinity of schools is shown to reduce smoking rates among students (29).

3

BAN TOBACCO ADVERTISING

Other ideas for action can be found in the **WHO Manual on Making Cities Smoke-Free** (30)
WHO Framework Convention Guidelines on Tobacco Advertising, Promotion and Sponsorship Bans (Article 13) (31)

HEALTHY FOOD FOR ALL
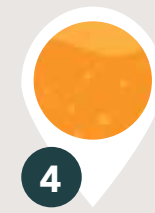
Establish and implement policies to reduce sugar-sweetened beverage consumption, such as taxes on the production or sale of sugar-sweetened beverages.

WHY IT MATTERS: Consumption of sugar-sweetened beverages is a leading cause of obesity and a contributor to diabetes (32). They include fruit juices and drinks, energy and sports drinks, sweetened teas and flavoured milk drinks.

WHAT A CITY CAN DO: Interventions to limit sales and advertising have been shown to be beneficial. Cities may be able to do this by limiting the sale of sugar-sweetened beverages in all public places controlled by city authorities. They may also be able to use planning levers such as licensing restrictions, zoning laws and incentive schemes to promote the sale of healthier food.

If a national tax exists, cities should work to promote and implement it. Increased taxes on these beverages have been shown to reduce their consumption, especially among people with lower incomes (33). Some cities may be able to directly influence taxation on sugar-sweetened beverages.

Raising public awareness of the health harms of sugar-sweetened beverages is also important, and communities should be involved in shaping and delivering campaigns.
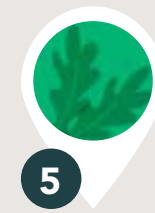
4

REDUCE THE CONSUMPTION OF SUGAR-SWEETENED BEVERAGES

Implement key components of the evidence-based WHO SHAKE package for salt reduction (34).

WHY IT MATTERS: Excessive salt intake is a leading cause of raised blood pressure, which is the largest contributing factor to cardiovascular disease and stroke (35).

WHAT A CITY CAN DO: Cities can work to promote healthier environments by requiring labelling of salt content in restaurants, improving access to low-salt food, and educating people on the importance of salt reduction. In some cases, cities can work with food manufacturers, suppliers, restaurants and street-food vendors to reformulate products to contain less salt.

5

REDUCE SALT CONSUMPTION

Other ideas for action can be found in the **WHO Global Database on the Implementation of Nutrition Action** (36)
and the **NOURISHING database** (37)

PHYSICAL ACTIVITY
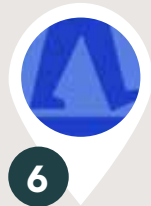
Improve pedestrian and bicycle networks and infrastructure across the city to ensure safe and equitable access to services, and to promote more walking and cycling for recreation and transport.

WHY IT MATTERS: If city streets are not safe, people are less likely to engage in physical activity, whether through active transport or for leisure.

WHAT A CITY CAN DO: Cities designed using principles of compact or mixed land use provide highly connected neighbourhoods that promote walking and cycling. This can lead to less use of motorized transport for short trips, reduced congestion and air pollution, and more cohesive communities. Safe pedestrian crossings, landscaped walkways and shade provision will encourage more walking, and appropriate cycle lanes, separated from vehicular traffic, will encourage bicycle use. End-of-trip facilities, such as bike storage, will also encourage more people to cycle.

6

CREATE WALKABLE, BIKEABLE, LIVABLE STREETS

Other ideas for action can be found in the **WHO Global Action Plan on Physical Activity 2018–2030** *(38)*

AIR POLLUTION
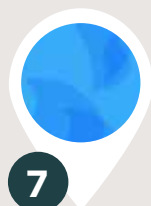
Reduce ambient air pollution through interventions in polluting sectors, such as in transport, solid waste, and industries, and promote cleaner indoor air through access to cleaner fuels and technologies for cooking, heating and lighting.

WHY IT MATTERS: Ambient air pollution is a major health risk, with around 91% of the world's population living in places where air pollution levels exceed WHO limits *(39)*. Indoor air pollution, generated largely by indoor use of biomass fuels for cooking, heating and lighting, is responsible for an estimated 3.8 million deaths per year *(40)*.

WHAT A CITY CAN DO: *Household air pollution* can be addressed by introducing cleaner fuels and technologies for cooking, heating and lighting. Other elements include improved housing and ventilation design and raising awareness around changes in cultural habits for cooking and household energy management.

Ambient air pollution can be addressed through policies that support compact urban design, sustainable transport systems, adequate housing and better municipal waste management. Changes in fuels and technology are also very important.
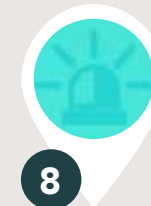
7

CLEANER AIR

Other ideas for action can be found in the **WHO BreatheLife 2030 Solutions** *(41)*

ROAD SAFETY

**Increase enforcement of drink-driving laws.**

WHY IT MATTERS: Driving under the influence of alcohol is a leading cause of road crashes. While more countries have adopted drink-driving laws that align with best practice, enforcement of these laws remains a challenge. Encouraging people to avoid drinking and driving may also help reduce excessive alcohol consumption generally, which is a contributing factor to noncommunicable diseases like cancer and cardiovascular disease *(42)*.

WHAT A CITY CAN DO: Reducing blood-alcohol concentration limits to 0.05 g/dl (0.02 g/dl for young or novice drivers), strengthening enforcement and increasing penalties for impaired driving, including suspension of driving privileges, have been successful in reducing the number of road traffic deaths and injuries. Restricting access to alcohol by limiting its sale and advertising is also a proven prevention strategy. Media campaigns highlighting the dangers of drink-driving can support road safety efforts.

8

REDUCE DRINK-DRIVING

Establish lower speed limits and strengthen existing speed-limit enforcement.

WHY IT MATTERS: Speed is a leading contributor to the risk of death and injury in the event of a road traffic crash, contributing to around one third of road traffic fatalities in high-income countries and up to one half in low- and middle-income countries. A 5% average reduction in speed can reduce fatal crashes by 30% *(43)*.

WHAT A CITY CAN DO: Speed limits should be established to the function of each road. In urban areas, a maximum speed limit of 50 km/h on non-highway streets is recommended to reduce the number and severity of road traffic crashes. When motorized traffic mixes with pedestrians and cyclists, the speed limit should be no more than 30 km/h to further reduce the risk of severe injuries or death *(41)*. In addition to enforcing speed limits, other approaches to managing speed include building or modifying roads to include features that calm traffic such as speed bumps; using automated speed control systems to reduce speed; advocating that vehicle manufacturers install in-vehicle technologies such as intelligent speed assistance; and raising awareness about the dangers of speeding through media campaigns.
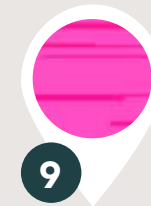
9

SPEED MANAGEMENT

Increase enforcement of seat-belt and motorcycle helmet use.

WHY IT MATTERS: Seat-belts and motorcycle helmets are proven to help prevent injury and death in the event of a road traffic crash. Wearing a seat-belt reduces the risk of fatal injuries by 50%. Motorcycle helmets can reduce the risk of death by 40% and the risk of severe injury by 70% *(12)*.

WHAT A CITY CAN DO: Good legislation and law enforcement on seat-belts and motorcycle helmets can save lives. As with other road safety laws, improving law enforcement capacity and investing resources in enforcement efforts, will help to make those laws more effective. In addition, working with helmet manufacturers to ensure that quality helmets are available on the market at an affordable price will also ensure that these life-saving devices are more widely used. Combined with legislation and enforcement, media campaigns help make the public aware of the importance of seat-belts and motorcycle helmets for every journey.
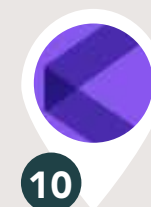
10

INCREASE SEAT-BELT AND HELMET USE

Other ideas for action can be found in the **WHO SAVE Lives road safety technical package** *(44)*

Putting it into practice

—— Experiences from 19 cities around the world
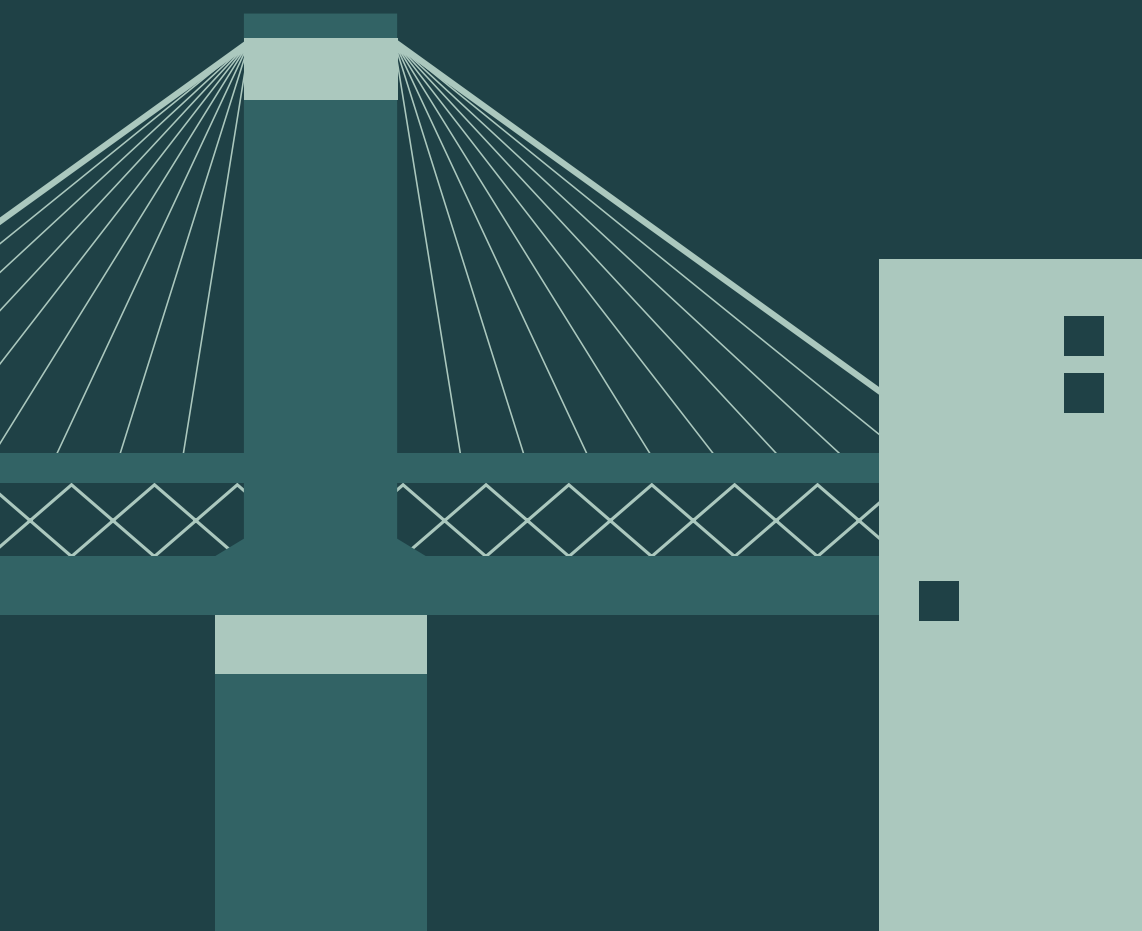
This section describes interventions that target our selected issues (tobacco control, food policy, physical activity, air quality, road safety, and NCD surveillance) in19 cities.

A number of drivers affecting programme development, delivery and evaluation have been identified. These factors are analysed to understand how each can contribute to programme success by addressing a key area of work or common challenge. They are divided into two sections: internal drivers and external drivers. Internal drivers are those that can be directly and internally managed by a municipal team running a programme, such as planning or monitoring. External drivers are factors external to the project team but that will nonetheless affect the programme and must be considered, including community engagement and partnerships.

Alongside the drivers, there is an overview of common challenges that can undermine programme success, as well as ideas on how some of them can be mitigated.

Examples of cities working on NCDs and road safety interventions

London
UK

Indore
India

Howrah,
West Bengal
India

Mumbai
India

Beijing
China

Vienna
Austria

Hoi An
Viet Nam

Kuwait City
Kuwait

Balanga City
Philippines

Accra
Ghana

New York City
USA

Cotonou
Benin

Bangalore
India

Phnom Penh
Cambodia

Bogotá
Colombia

Bogor
Indonesia

Fortaleza
Brazil

Cape Town
South Africa

Bangkok
Thailand

City	Income group	Intervention description
Accra, Ghana	Lower-middle-income	Coordinated efforts to improve road safety and air quality
Balanga City, Philippines	Lower-middle-income	A city-wide approach to creating a smoke-free city and banning tobacco advertising
Bangkok, Thailand	Upper-middle-income	Efforts to reduce speeding and improve traffic safety measures
Beijing, China	Upper-middle-income	Mobile technology for the enforcement of smoke-free zones
Bangalore, India	Low-income	The use of "cycle days" and community engagement to increase walking and cycling in the city
Bogor, Indonesia	Lower-middle-income	A city's approach to banning tobacco advertising, promotion and sponsorship
Bogotá, Colombia	Upper-middle-income	Data collection on road safety
Cape Town, South Africa	Upper-middle-income	City-wide activities to reduce the consumption of sugar-sweetened beverages
Cotonou, Benin	Low-income	The use of a global surveillance tool to collect city-level data on NCD risk factors
Fortaleza, Brazil	Upper-middle-income	Campaigns and data to improve options for active transport
Hoi An, Viet Nam	Lower-middle-income	The development of active transport and outdoor public spaces
Howrah, India	Lower-middle-income	Smoke-free environments: The process of becoming an official "smoke-free city"
Indore, India	Lower-middle-income	The use of NCD risk factor and environment data to guide urban development
Kuwait City, Kuwait	High-income	The reformulation of popular snacks to reduce salt content
Mumbai, India	Lower-middle-income	Collaboration with an external network to build capacity in road safety
London, UK	High-income	Improving healthy food knowledge and provision for children in early childhood education and childcare settings
New York City, USA	High-income	A comparative study on walkable, bikeable and livable streets for older people
Phnom Penh, Cambodia	Lower-middle-income	Reducing the consumption of sugar-sweetened beverages through public awareness campaigns and community engagement
Vienna, Austria	High-income	Comprehensive strategies to encourage walking for transport and leisure

Income classification
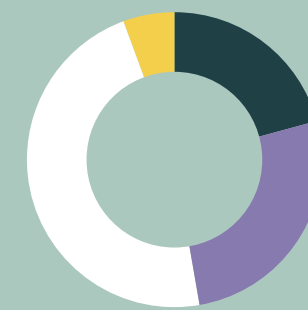
■ High income
■ Upper-middle income
□ Lower-middle income
■ Low income

Geographic region

■ SEARO
■ WPRO
■ PAHO
■ EURO
■ EMRO
■ AFRO

Intervention areas
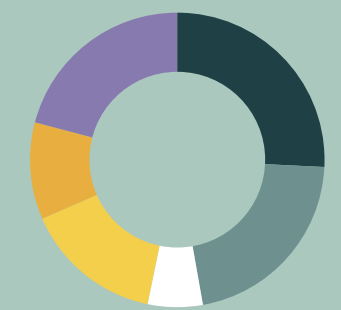
■ Physical activity
■ Tobacco control
□ Air pollution
■ Road Safety
■ NCD Surveillance
■ Healthy food

A schoolgirl enjoys a healthy snack in Cali, Colombia
Photo credit: City of Cali/Vital Strategies.

INTERNAL DRIVERS
for tacking NCDs and road traffic injuries in cities

Internal drivers are factors that can be directly and internally managed within a city's programme operations. Examples considered in this report are:

1.1
Strategic planning

1.2
Equitable access

1.3
Intersectoral governance

1.4
Monitoring and evaluation
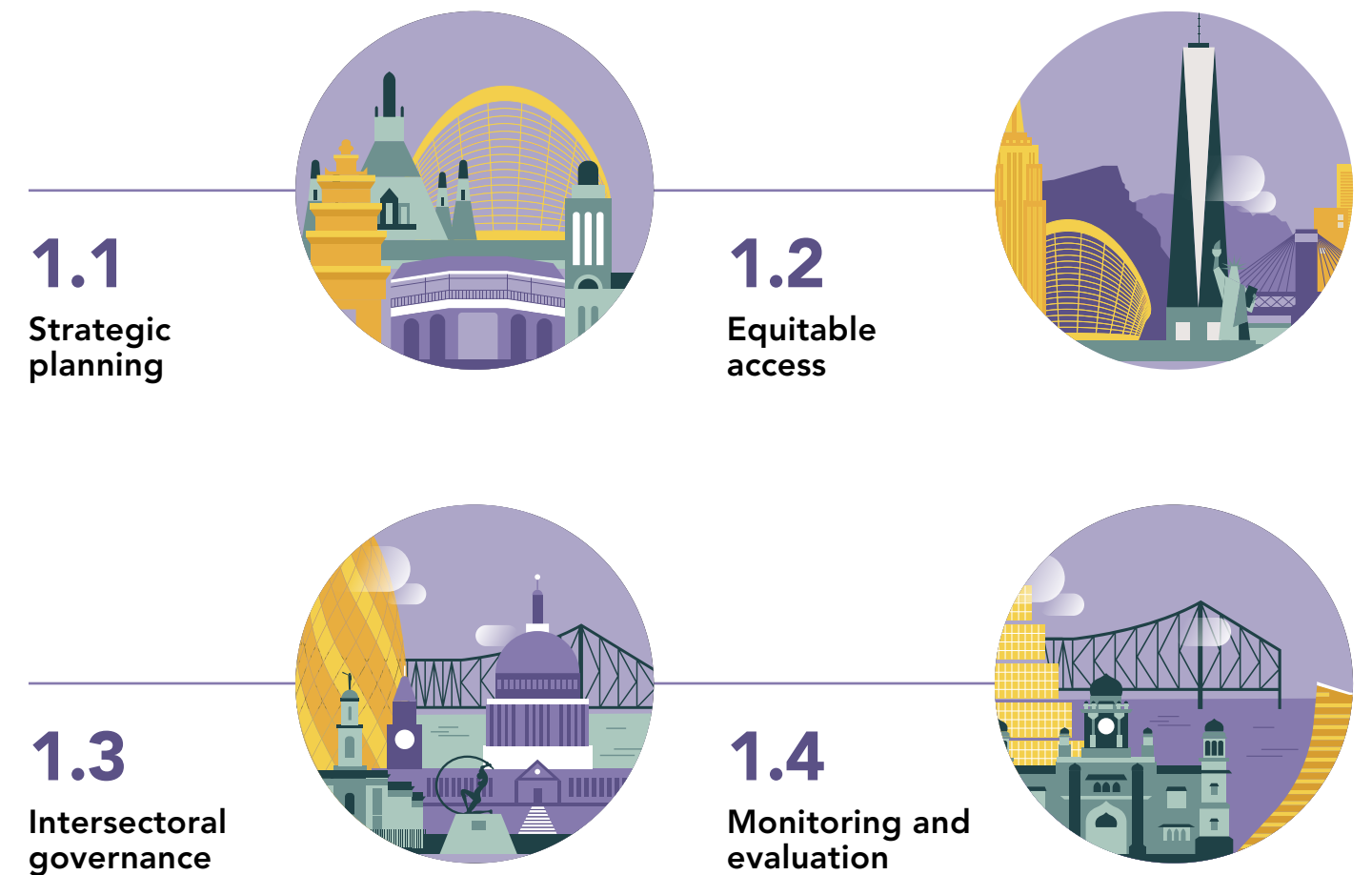
Strategic planning

1.1 | INTERNAL DRIVERS

Every city has its own priorities, social issues and governance structures to consider when selecting options for action. Key considerations for developing a strategic vision and implementation plan include identifying needs and challenges, understanding which populations or geographic areas are affected, and the extent to which the city can act independently. Strategic planning should involve stakeholders from different backgrounds and ensure there is a collective understanding of what they are working towards and how, especially where target interventions are cross-sectoral *(45)*.

Assessing the existing policy landscape is important to determine how a new programme can align with or build on existing priorities, legislation or capacity. This could include looking for opportunities to use national policies as the impetus for local programmes. Areas where there is likely to be success should be strongly considered, as good results from one policy can facilitate the introduction of others. Ease of implementation and potential impact will be important factors in programme selection. The ability to demonstrate at least interim progress within a relatively short timeframe is important to support the political and public acceptance of an intervention's value, or of progress for other stakeholders. ●

Build on existing national or local activities

Cape Town, South Africa

*In 2018, **Cape Town, South Africa** coordinated a campaign to improve healthy eating and reduce consumption of sugars to coincide with a new national tax on sugar-sweetened beverages. The Health Promotion Levy or Sugar Sweetened Beverage tax – passed by the Government of South Africa in December 2017 – entered into force on 1 April 2018. The media interest generated provided a good lead-up for the city's own campaign, which was implemented in July 2018 and similarly emphasized the potential health risks of sugar-sweetened beverages.*

A poster from the city of Phnom Penh's public awareness campaign about the health risks of sugar-sweetened beverages.
Photo credit: City of Phnom Penh/Vital Strategies.

Look for gaps in existing legislation

Bangkok, Thailand

*In 2017, local agencies in **Bangkok, Thailand** mapped existing road safety laws and regulations to understand legislation gaps, and reviewed data on road safety risk factors to determine priority areas where action should be taken by the city. They used this information to select speed reduction as an area of focus, leading to the introduction of several new measures, such as the purchase of a new road safety camera system covering selected high-speed roads.*

Consideration should also be given to how a selected intervention can use multiple channels (e.g. policies, awareness campaigns and engaging local partners) to reach its target population, and how these will be coordinated so that they reinforce each other and facilitate sharing of insights or learnings between programmes. This includes identifying and involving key stakeholders and target audiences from the outset. ●

Tuk Tuks supporting the public health campaign in the city of Phnom Penh.
Photo credit: City of Phnom Penh/Vital Strategies.

Inclusive planning

Phnom Penh, Cambodia

*In 2018, municipal authorities in **Phnom Penh, Cambodia** aimed to reduce consumption of sugar-sweetened beverages in the city. They undertook a coordinated planning approach to structure their work by simultaneously looking at new policies, raising public awareness and engaging with local partners. This allowed municipal authorities to take advantage of efficiencies between the three work streams, such as testing communications messages with local stakeholder groups that understood the target audiences. It also allowed synergies between the short-term public information campaign and longer-term policy development.*

Clarifying the key objectives of a programme can also help ensure that activities are centered on achieving those aims.

Defining targets

Hoi An, Viet Nam

When looking at how to protect public spaces for recreation and physical activity and also ensure equitable access in **Hoi An, Viet Nam**, the city created a Public Spaces Master Plan 2015–2020 (see Figure 1). The Plan establishes a number of activities to ensure that the city can maintain sufficient public space despite urban expansion, and that the spaces meet community needs.

Areas are broken down by type of space – such as mini-parks, larger city parks or recreation centres – with targets for how many of each should exist by 2020 (see Figure 2). The Plan also categorizes practical issues such as the cost of developing a new site and the amount of city land it would require. These elements are essential for urban planners, but also serve as an accountability mechanism so that communities can see how local government is responding to their needs for public space.

Figure 1: Sample targets from the Hoi An Public Spaces Master Plan 2015–2020

Categories	2020 target			Existing PS (2015)		New development (to 2020)	
	# of PS (sites)	Area (square meters)	Standard (square meters per person)	# of PS (site)	Area (square maters)	# of new PS (site)	Area (square maters)
#1. Public spaces at neigbourhood level							
Mini park/parkette	46	71,705	1.64	19	24,622	27	47,083
Community house	90	90,256		75	65,211	15	25,045
#2. Public spaces at commune/ward level							
Rest stop/ recreation	27	10,122	1.53	7	4,963	20	5,159
Sport and cultural center	16	140,658		12	113,758	4	26,900
#3. Public spaces at city-wide level							
City park	20	596,438	6.04	7	52,748	13	543,690
All categories of public spaces of Hoi An city							
	199	909,179	9.21	120	261,302	79	647,877

Figure 2: Data visualization showing the different types of public space available in the city of Hoi An
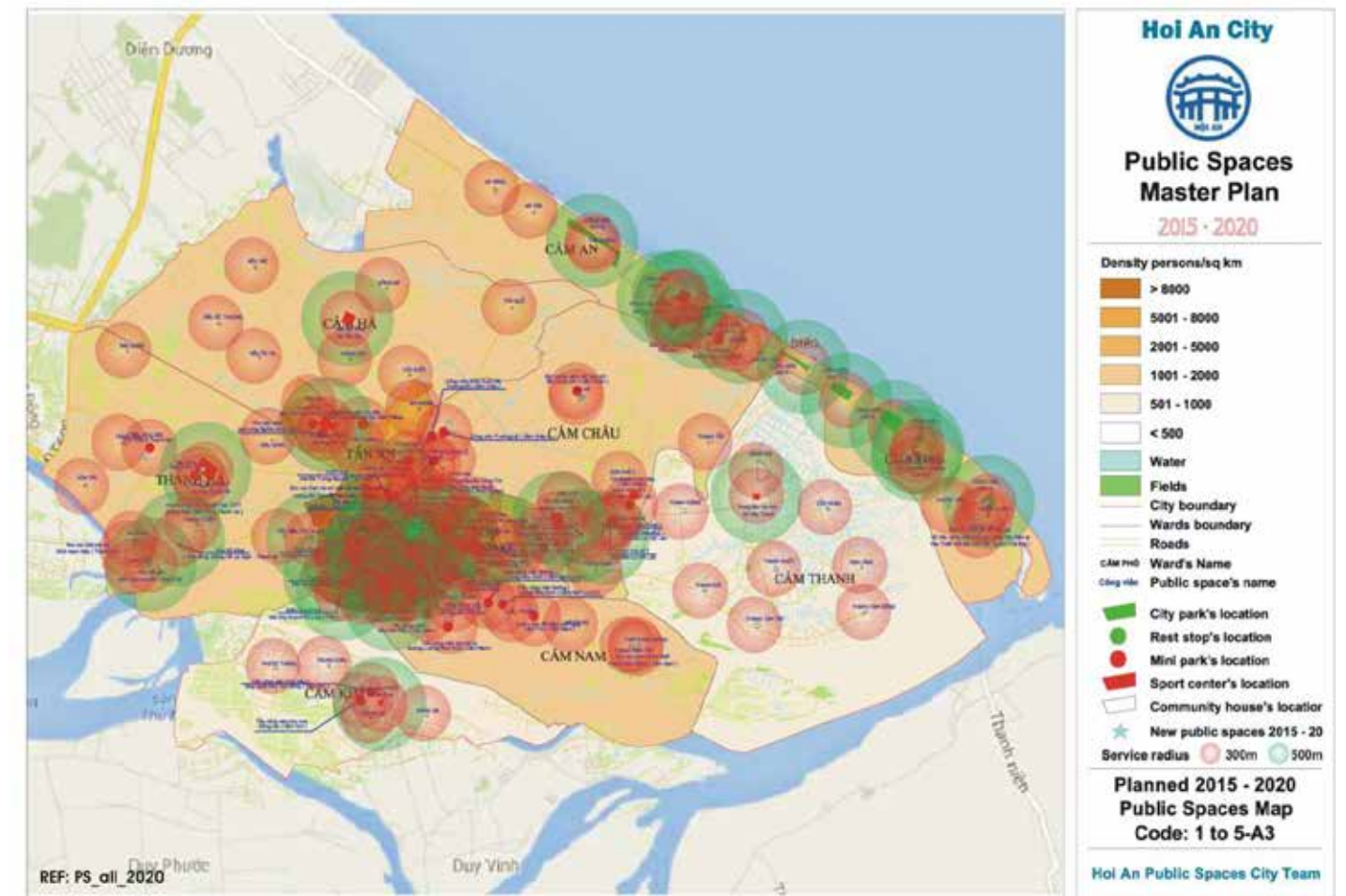
Photo credit: Hoi An Public Spaces City Team/HealthBridge.

Equitable access

1.2 | INTERNAL DRIVERS

Equity (equal access to quality services for all) is a fundamental aspect of any urban health programme *(46)*. Cities should create environments that support healthy lifestyles for everyone. However, there can be significant variation within a city in terms of who is able to access either services or spaces intended to improve health. If local parks are concentrated in one area of a city, it can limit health benefits for those living at a distance *(47)*. If opportunities for health are clustered within the wealthier areas of a city, it can create a serious equity issue, especially if there is a lack of (or low-quality) public transport options. A one-size-fits-all programme will not reach all people equally, and certain groups will end up excluded from its health benefits.

When designing programmes, municipal authorities should therefore consider the equity aspect of their work. This involves assessing who the interventions are most likely to reach, whether this is the priority target group, and how others may be unintentionally excluded. To mitigate exclusion and balance out any inequalities in access or benefits, they should look at adding or adapting activities to ensure that potentially marginalized or vulnerable groups can benefit equally from any new policy or service (48). For example, equitable access to public transport ensures that the benefits of a city's transport system can be accessed by those who most need them, such as people who cannot afford private transport.

Aside from physical access, ensuring that programme content is accessible in terms of how it is communicated is important for achieving positive behaviour change. Clearly defining the needs and preferences of a target audience can help tailor content to meet the needs, beliefs or preferences of that group, meaning it is more likely to produce positive impact on behaviour.

Older people exercising in a park in New Delhi, India.
Photo credit: WHO/SEARO/Rajan Kumar.

It is also important to consider how a new programme will affect equitable access in terms of age. The accumulation of specific advantages or disadvantages that people encounter over their lifetimes will affect their longer-term health outcomes (49). A city should work to create programmes that focus support on specific, vulnerable age groups, such as children or older people. ●

Designing for the end user

Cape Town, South Africa

*Coinciding with ongoing national efforts to reduce consumption of sugar-sweetened beverages, **Cape Town, South Africa** launched a citywide mass media campaign to strengthen public awareness about the link between these drinks and obesity and diabetes. Before designing the campaign, city authorities organized a baseline survey of local community attitudes, which identified a public perception that sugar-sweetened beverages were good because they "gave you energy". As a result, campaign messaging was structured around correcting this false belief to ensure it responded to target audience knowledge (see Figure 3).*
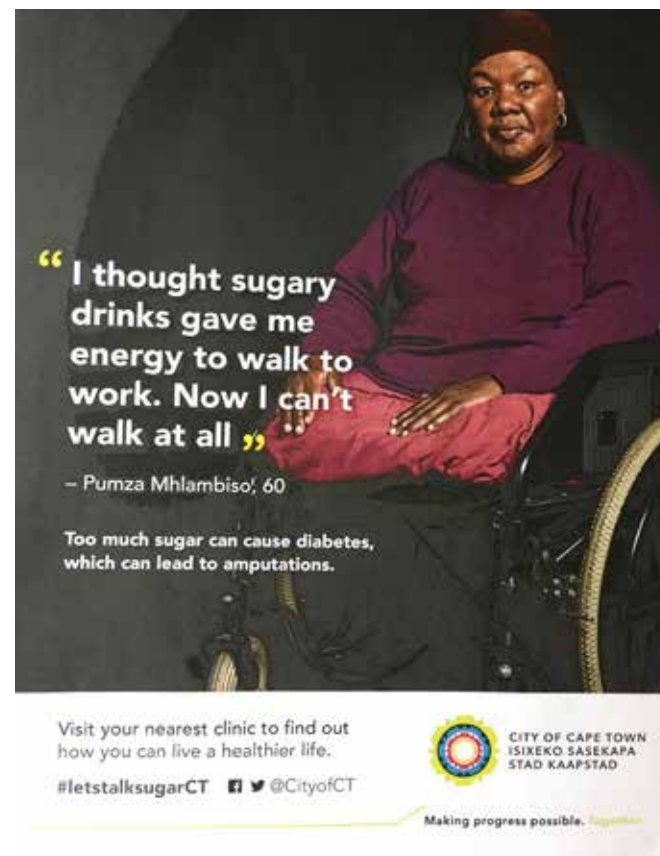
Image from a campaign to increase public awareness of the health risks of sugar-sweetened beverages in Cape Town, South Africa. A key component of the campaign was to illustrate actual cases of community members who have been affected by intake of sugars and the associated health risks.
Photo credit: City of Cape Town/Vital Strategies.

Tailor new services to support vulnerable users

New York City, USA

Older people are at greater risk of injury and death due to slower walking speeds or mobility limitations related to age. Older pedestrians may have more difficulty crossing streets, and they are at greater risk of injury and death due to collisions.

*Focusing on the needs of this user group, **New York City, USA** has developed various initiatives to make roads safer for older people. Through the Safe Streets for Seniors Initiative, 182 Street Improvement Projects in 41 Senior Pedestrian Focus Areas have been completed across the city, including projects to lengthen pedestrian crossing times and install pedestrian islands. The work has resulted in a 16% reduction in senior pedestrian fatalities since the initiative began in 2008, from an average of 65 senior fatalities per year between 1999 and 2007 to an average of 54 between 2008 and 2016.*

Intersectoral governance

1.3 | INTERNAL DRIVERS

Collaboration is crucial, but a single agency should ultimately be accountable for ensuring that a new policy or programme delivers its intended health objectives. Because cities are intersectional spaces where many health risk factors converge, mayoral offices can play a valuable role in supporting creation of multisectoral coalitions. Coordination with other government departments can help reinforce existing work and provide efficiencies in the implementation and management of activities. Opportunities for cross-programme efficiencies should be identified and included in the scope of work.

Other sectors can do the same for integrating pro-health elements into their work. For example, the Global Designing Cities Initiative works with city practitioners to create safe, sustainable, and healthy cities through better street design, including ways for people to be more active *(50).* ●

Find links to other topics

London, UK

The Greater London Authority and local authorities in **London, UK** have co-designed an award evaluation framework for their Healthy Early Years London (HEYL) programme to promote health, well-being and development, including healthy eating for children under the age of 5 in early childhood education and child care settings. This shows local boroughs and settings how well they are meeting programme targets in terms of health, well-being and development – how many children are receiving healthier food, for example – in addition to educational objectives. The evaluation tool was specifically designed to mirror national standards against which schools in England are judged: the Common Inspection Framework of the Office for Standards in Education, Children's Services and Skills (OFSTED). By doing this, the HEYL framework is relevant to both education and health services, providing an evaluation efficiency that measures progress toward targets for both sectors using a common assessment tool.

FINDING THE DATA:
HEALTHY EATING

*The **WHO Global Database on the Implementation of Nutrition Action** (35) is an interactive platform for sharing standardized information on nutrition policies, actions and programmes. It looks at national-level policies but is useful for cities to access information on their national context. As of May 2019, it held information on 2255 policies in 201 countries.*

Mayor Sadiq Khan at the launch of the HEYL programme in 2018.
Photo Credit: Greater London Authority.

Look for efficiencies in programme objectives

Fortaleza, Brazil

Urban design can help cities make roads safer and increase active transport such as walking or cycling. In **Fortaleza, Brazil**, municipal authorities implemented a number of programmes to improve road safety and thereby increased the use of active transport routes by pedestrians and cyclists. Activities included temporary interventions such as the Cidade 2000 project, which reclaimed underutilized road space as public space for the community. Over 1200 square metres of underutilized parking space was reclaimed as a new plaza where local residents could walk, sit and spend time together. Three new crosswalks were introduced to give clear priority to pedestrians. Speed reductions were implemented in certain zones near the new public spaces. Altogether, the measures resulted in safer vehicle speeds while improving the community's enjoyment of the street space and encouraging more outdoor activities. This one-off project was then scaled up for broader impact through creation of a citywide programme **Cidade da Gente** (City of People), which allowed the model to spread to other parts of the city.

Ask another department for support where they have a comparative advantage

Howrah, India

In 2010 the city of **Howrah, West Bengal, India** introduced the Smoke-free Howrah campaign to make the entire city free from tobacco smoke. The city's police force, rather than local health authorities, was the primary agency for enforcing the new smoke-free laws. The support of local law enforcement strengthened initial enforcement efforts, in part because their involvement meant that those who violated the smoke-free laws would be penalized for the offence. This was considered to be a key factor in widespread compliance with the law and resulted in sharp reductions in reported smoking in public places. But it was not just a penal approach. Police stations themselves championed the new law by becoming smoke-free, using their own behaviours to set a positive example.

Monitoring and evaluation

1.4 | INTERNAL DRIVERS

Monitoring and evaluation (M&E) is critical for a city to demonstrate the impact of its work. A well-designed M&E system enables local government to monitor activities, assess the use of resources, and evaluate the impact of these activities and whether (or not) goals were achieved *(51)*. It also establishes a performance feedback mechanism for continual improvement, including the ability to adapt programme implementation based on results and the changing needs of a population. M&E is especially important for demonstrating the effectiveness of policies on NCDs and road traffic injuries, adding to the global evidence base, and providing guidance for others.

M&E in cities differs in some respects from M&E at the national level. However, cities should aim to match any

indicators assessed at a national level, as harmonizing local and national indicators helps facilitate data comparability between cities in different regions or countries, and ensures that city indicators benefit from existing national, regional or global evidence. Indicators should also be aligned with existing global recommendations, such as the WHO Global Reference List of 100 Core Health Indicators *(52)*. For example, in **Bogotá, Colombia**, a mortality index on road safety is generated according to the methodology recommended by WHO for numbers of deaths or injuries per 100 000 inhabitants *(53)*.

However, data for national-level health indicators are generally not collected consistently at city level. It may be possible to determine representative city samples from national-level data, but this process has its own methodological challenges around proportional demographic representation and accuracy. Common sources of data at the city level are likely to include administrative and institutional data from government data banks. They may also include population-based surveys, surveillance studies, project-specific evaluation studies, clinical reporting systems and civil registration records.

In some areas, city-level versions of national data collection mechanisms already exist. Data on implementation of smoke-free policies in the world's most populous cities is published in the biennial *WHO Report on the global tobacco epidemic (54)*. When there is a clear outcome definition, a city can use this metric to monitor progress. ●

Use a recognized global indicator to define a goal

Howrah, India

Howrah, in West Bengal, India *used the established definition of "smoke-free" – at least 92% of public places smoke-free – as a reduction target during a 7-year campaign to reduce tobacco use from 2010–2017. In 2017 the city was officially declared smoke-free on World No Tobacco Day (May 31), having used a compliance assessment survey to demonstrate an absence of active smoking in more than 92% of its public places.*

Children learning how to make a healthy dish in Cali, Colombia.
Photo credit: City of Cali/Vital Strategies.

What makes city monitoring and evaluation different?

1   Local focus.

Monitoring of policy changes should only cover policies led by cities themselves, as opposed to nationally driven policies. However, cities may also want to monitor other aspects of the policy landscape that affect them, or evaluate the impact of national policies that affect city residents.

2   Enforcement authority.

With a smaller geographic area to manage, city governments are better positioned than national governments to more thoroughly and universally enforce policies. Using compliance surveys and administrative data from enforcement agencies, cities can track gaps, strengthen enforcement and evaluate the impact of efforts to reduce NCDs and road injuries.

3   Boundaries and jurisdictions.

City boundaries are complex and do not necessarily conform to officially designated jurisdictional lines. For action within a city to be effective, the relationship between the city and its peripheral areas must be considered. Any M&E framework must take these realities into account by being clear about target population groups, but also the potential impact of actions beyond these – such as on populations that rely on a city's resources and infrastructure but do not live within its administrative boundaries.

4   Detailed geolocation.

A relative strength for cities is their ability to resolve data at fine levels of geographic detail or for key sub-population groups of interest. The diversity of populations within cities can necessitate collecting data at neighbourhood level. For example, they can guide road safety interventions through fine-tuned monitoring systems that identify event locations – places with a higher incidence of crashes, injuries and fatalities.

5   Data sources.

Certain common sources of data for national M&E systems, such as population household surveys, may be prohibitively expensive for city governments to implement. City M&E systems can therefore consider a broader range of data sources to measure key indicators. When local data are not available, statistical techniques can be used to estimate local metrics using national or regional information. However, cities should invest in local data collection to the extent possible, since actual local data will be more accurate than statistical estimates and also be more resonant with stakeholders.

6   M&E governance.

Most cities are currently limited in their internal administrative capacity to conduct M&E for NCDs. As cities develop M&E systems, it is important to build systems that are practical and realistic for the short, medium and longer term, and that can be managed sustainably by the city itself.

Identifying or collecting baseline data is essential for measuring meaningful health outcomes of a new policy or programme. Without a baseline, evaluating the effect of interventions is not possible. An M&E system also requires technical capacity to collect and analyse data, and report back to programme management and policy-makers on a regular basis.

Adapt national measurement tools for the urban context

Indore, India

The city of Indore, India used the WHO STEPwise approach to NCD risk factor surveillance (STEPS) to obtain accurate population-level data on the most significant NCD determinants, including tobacco use, alcohol consumption, obesity and high blood pressure.

In January 2016, Indore became one of 100 cities in the Government of India's urban development and retrofitting programme, Smart Cities Mission. Conscious of the need for health to be reflected in their work plan, in March 2018 the city partnered with John Snow Inc (JSI) under the Building Healthy Cities project to collect baseline data on NCD risk factors.

The findings will help define a work plan for health promotion in the city, with the data added to a public online dashboard. By understanding risk factor prevalence in the city, targeted work plans and interventions can be developed.

A sign designating a smoke-free area in India.
Photo credit: WHO/SEARO/Anubhav Das.

Integrate relevant data from other sources

Bogotá, Colombia

***Bogotá, Colombia** has a robust data hub on road safety incidents. It is updated on an ongoing basis through an agreement with the Public Transport Police, which registers the site of each new incident through the Police Report on Road Incidents (IPAT) and coded using a geolocation tool. Types and producers of data include geolocations on traffic information (SIGAT), big data from the National Department of Statistics (DANE) and data from the National Institute of Legal Medicine and Forensic Sciences (INMLCF).*

The city's Vision Zero (Visión Cero) programme on road safety has benefited significantly from this databank, which collects data from multiple sources to identify areas of concern for road safety. Taken together, all of this information has allowed the city to obtain a fuller picture of incident locations and mortality trends to help inform decisions about where to target new initiatives.

FINDING THE DATA:
ROAD SAFETY IN CITIES

***Safer City Streets** is a global road safety network of over 40 cities, managed by the International Transport Forum, which collects, validates and analyses road safety data (55). Indicators include road deaths and injuries, number of trips taken, vehicle-kilometres and passenger-kilometres travelled, vehicle fleet composition, resident population, daytime population, and helmet and seat-belt use.*

Regular data has allowed Bogotá to develop an advanced database on road mortality in the city, including disaggregated data on different types of road users and historical trends for each.

Figures replicated from the 2017 Road Safety report produced by the District Secretariat for Mobility (52).

51%

Pedestrians

On average, 51% of deaths in the last 5 years.

Pedestrian deaths from road incidents declined from 54% of road users (2013) to 50% (2017).

11%

Cyclists

On average, 11% of deaths in the last 5 years.

Cyclist deaths declined from 12% of road users (2013) to 11% (2017).

26%

Motorcyclists

On average, 26% of deaths in the last 5 years.

Motorcyclist deaths increased from 18% of road users (2013) to 28% (2017).

[i] Gráfica 14, 'Históricos de Víctimas en Bogotá' page 26, *Anuario de Siniestralidad Vial de Bogotá* 2017. Online report available at: https://www.simur.gov.co/portal-simur/datos-del-sector/documentos/anuario-de-siniestralidad/.

EXTERNAL DRIVERS
for tackling NCDs and road safety in cities

External drivers are factors external to intervention design and implementation, but that will affect programme operations and outcomes. The issues considered in this report are:

2.1
Political leadership

2.2
Local partnerships

2.3
Community engagement

2.4
City networks

Political leadership

2.1 | EXTERNAL DRIVERS

Mayors and other city leaders play an important role in establishing comprehensive big-picture visions, establishing overarching goals, and fostering support for a policy or programme. An initiative that does not have explicit approval from the highest levels of city government is less likely to gain widespread acceptance or be sustained over a sufficiently lengthy time to produce meaningful outcomes or impact.

High-level leadership is often needed to align multiple city agencies, initiatives and collaborators (many of which operate with a narrow focus), to meet broader public health goals. City leaders can also use their roles as public figures to considerable effect in agenda-setting, boosting media coverage, and increasing public awareness of a new policy or service.

Leaders need to set the vision

Balanga City, Philippines

*In 2007 Mayor Jose Enrique S. Garcia III of **Balanga City, Philippines**, had a vision for Balanga to develop its profile as a university town and an emerging hub for business and technology. One of the key aspects of delivering this was to create a healthy environment for students, families and visitors. The Mayor saw tobacco – with its pollutants, smoke and health risks – as a threat to that vision. Throughout his time in office, from 2007 to 2016, he consequently supported multiple initiatives to reduce tobacco use across the city. Actions included banning its use within designated areas, running large public awareness campaigns, and establishing a Smoke-Free Task Force to support the enforcement of anti-tobacco legislation.*

Mayor Mohammed Adjei Sowah announcing Accra's road safety project with the *Partnership for Healthy Cities*.
Photo credit: City of Accra/Vital Strategies.

However, gaining and maintaining political prioritization are two very different activities (see Section 3.3). In a democratic environment where political leadership changes regularly, it is important that an initiative not become too closely associated with a particular individual, no matter how popular, but rather is able to deliver outcomes for the local health system and long-term value for a community. ●

Local partnerships

2.2 | EXTERNAL DRIVERS

Health care is a multisectoral issue, and partnerships must be formed to effectively deliver it. Cities can extend their reach when promoting health and addressing the broader determinants of health and well-being through forging local partnerships with businesses, civil society and community organizations.

Find collective benefits with local organizations

Fortaleza, Brazil

In **Fortaleza, Brazil**, the local business community was an important partner in sponsoring a free bike-share programme to encourage active commuting and improve both road safety and air quality. Active commuting was promoted through collaboration between six government departments and local businesses to make 40 bikes available to the public through an initiative known as **Bicicletar Corporativo**. The partnership model helped increase awareness of the programme, and support from local businesses was used to encourage participation by employees, who were part of the target audience.

Define roles based on strengths

Bangalore, India

In **Bangalore, India**, the city's Cycle Day initiative was designed as the first collaborative approach to active transport policy in India. The initiative is led by the Bangalore Coalition for Open Streets (BCOS), a public-private partnership to develop awareness about creating conducive environments for cyclists and increasing cycling for short commutes and neighborhood trips. Roles were allocated based on strengths and abilities – the Directorate of Urban Land Transport served as government anchor of the programme, with several NGOs enlisted to run various programme initiatives with assistance from cycling enthusiast groups.

A city park providing green space in Bangkok, Thailand.
Photo credit: WHO/Diego Rodriguez.

Align local and national partners

Accra, Ghana

Accra, Ghana is using the WHO Urban Health Initiative pilot project to engage multiple stakeholders to collect data, calculate the impacts of interventions, and implement policies to curb air pollution and improve health. It unites several local institutions along with branches of national bodies, including the Accra Metropolitan Assembly (AMA), the Ghana Health Service, the Ministry of Transport and Ghana Environmental Protection Agency, the National Development Planning Commission, and local universities. All of these agencies are working towards the common goal of cleaner air for health, environmental and climate benefits.

FINDING THE DATA:
AIR POLLUTION IN CITIES

*The **WHO Global Health Observatory (GHO)** – a WHO data portal – reports urban/rural data on the percentage of households relying mainly on clean fuels and technologies for cooking. For historical purposes, the GHO also includes data on the percentage of the population mainly using solid fuels for cooking (56).*

*The **WHO Global Ambient Air Quality Database** compiles annual mean concentrations of particulate matter of a diameter 10 µm (PM10) or less, and 2.5 µm (PM2.5) or less from ground measurements. It contains data from over 4300 cities and settlements in 108 countries (57).*

Community engagement

2.3 | EXTERNAL DRIVERS

Cities have a clear advantage in their ability to engage local communities in programme or policy design, delivery and enforcement. Ensuring that community groups have a role in a programme's delivery is crucial for local ownership and accountability. The proximity to communities also means that the public should be able to engage in the policy debate, communicating its needs and realities to city officials and policy-makers. Involving a community on issues such as campaign messaging is also key to encouraging effective behavioural change around a new policy, or greater participation in a new programme. ●

"We didn't go in saying, 'No' or 'here's a bike lane [or] here's a bus lane'.

We went in saying: 'What's the problem you're trying to solve?'"

Janette Sadik-Khan
Former Commissioner of Transportation, New York City *(58)*

Include the public in programme design

Vienna, Austria

*To meet its ambitious target of 80% eco-mobility (walking, cycling and public transport) by 2025, the city of **Vienna, Austria** first surveyed residents on the policy and built-environment features they wanted to see in the city, as well as barriers to walking that they experienced. They then used this information to design a series of campaigns, events and related communication strategies to foster interest in walking and increase awareness of its health benefits. Activities included a mobile app with a route-planning tool to help people plan their walk, and interactive features such as an activity-based reward scheme and a treasure hunt using interactive digital elements. In addition, a 900-square metre map of Vienna was constructed outside city hall on which residents could draw their favourite routes, providing additional information on preferences. Two thirds of residents judged the programme to have been good or excellent overall, attributed in part to how it responded to their opinions about what could improve walking and cycling in the city.*

Citizens attending a Cycle Day event in Bangalore, India.
Photo credit: HealthBridge.

FINDING THE DATA:
WHAT MAKES AN ACTIVE CITY?

The UN-Habitat Global Urban Observatory collects data from 741 cities in 220 countries on indicators relevant to making cities more conducive to active transport (59). Indicators include intersection density, paved streets as share of all streets, and percentage use of various modes of transport.

Involve the community in service delivery

Bangalore, India

*The Cycle Day initiative in **Bangalore, India** was designed to provide a behavioural step-change to move people towards walking and cycling. Rather than being structured as a top-down policy, it was deeply rooted in community action. Municipal authorities hoped that public demand to extend the programme would encourage other political and administrative bodies to increase investment into infrastructure by providing good footpaths and cycle lanes. More than 36 community partner organizations participated in a series of events, which demonstrated broad public support for the initiative and increased bicycle use in neighbourhoods throughout the city. It also resulted in the government investing approximately US $12 million in a bicycle sharing programme.*

Collect feedback from the public

Beijing, China - Fortaleza, Brazil

*In **Beijing, China**, city authorities used community opinion to determine the design of an intervention to reduce tobacco use. Based on growing rates of mobile phone use, the city decided to employ mobile technology in its fight against tobacco use by supporting a smartphone app that allows individuals to easily report breaches of smoke-free laws.*

*In **Fortaleza, Brazil**, the Bicicletar Corporativo programme used indirect data from the public to determine the programme's popularity and utility. By tracking bike usage patterns through GPS monitors, they were able to monitor peak times and see which routes were popular. The data demonstrated high demand for the initial 40 bikes and provided justification for expanding the service.*

City networks

2.4 | EXTERNAL DRIVERS

Building relationships and networks between cities is a way to support mutual learning and the sharing of experiences. This type of intercity diplomacy can help improve understanding of policy and programme design, implementation and enforcement, based on good practice and lessons learned. They can focus on specific topics or broader cross-cutting issues affecting citizen health and well-being.

Networks can offer technical guidance from other projects

Mumbai, India

*Authorities in **Mumbai, India** partnered with the Bloomberg Philanthropies Initiative for Global Road Safety (BIGRS) – a network of 10 cities from around the world – to receive technical support to improve road safety. Engaging with BIGRS brought an evidence-based approach to road safety, providing insights and best practices from across the world that proved extremely useful. Since the initiative began in 2015, Mumbai has succeeded in reducing the number of road crash deaths by 22%. According to observational studies conducted under BIGRS, the city has also seen an improvement in both helmet and seat-belt use, including an 11% increase in correct helmet use since 2015.*

A busy intersection in Mumbai, India.
Photo credit: Bloomberg Philanthropies.

Aerial view of a city intersection in the Lapaz neighbourhood of Accra, Ghana before and after a road safety intervention (2018).
Photo credit: City of Accra/Vital Strategies.

National networks can support cities within the same country or region, forming a support network of peers and technical resources. For instance, the Asia Pacific Cities Alliance for Tobacco Control unites 40 cities from 12 countries to discuss common tactics for strengthening tobacco control *(60)*.

The **National Association of City Transportation Officials (NACTO)** provides a city-to-city peer network where city officials can learn from each other, compare approaches and gain confidence to adopt new ideas. The collaboration between cities has influenced policy changes for safer and more sustainable streets across North America, created new design guidance to show cities how to accomplish change, and catalysed projects that have become models for good practice *(61)*.

The **WHO Urban Health Initiative** focuses on building city-level technical capacity and supporting collaboration between local, national and international partners working on urban policies that enhance health *(62)*. Its process model is currently being used in cities such as **Accra, Ghana** to help the city reduce deaths and diseases associated with air pollutants. This is accomplished by adapting existing analytical tools – such as the Health and Economic Assessment Tool for Cycling and Walking *(63)*) – for local use. The initiative also engages with communities, and trains clinicians and practitioners on the health and economic impacts of curbing air pollution.

Finally, networks within networks can be an effective way of devolving information. The WHO EURO Healthy Cities Network works with approximately 100 flagship member cities, and through them maintains links with approximately 30 national networks. The flagship cities interact directly with the WHO Regional Office for Europe, while the national networks bring together cities within a given Member State. In both cases, the core Healthy Cities Network is thus able to provide political, strategic and technical support to cities, whether directly or as a unit through their local network *(64)*. ●

Networks can help cities engage with external organizations and peers, for technical assistance and sharing experiences.

WHO networks relevant to NCDs and road safety in cities

1 **WHO Healthy Cities networks.**

The WHO Healthy Cities movement works to put health high on the social, economic and political agenda of city governments *(65)*. The goal is to engage local governments in political commitment, institutional change, capacity building, partnership-based planning, and innovation. Networks exist for each WHO region and provide appropriate resources and support for each:

1. *African Region (66)*
2. *European Region (64)*
3. *Eastern Mediterranean Region (67)*
4. *Region of the Americas (68)*
5. *South-East Asia Region (69)*
6. *Western Pacific Region (70)*

2 **The Partnership for Healthy Cities.**

A collaboration between Bloomberg Philanthropies, WHO and implementing partner Vital Strategies, this network of over 50 cities focuses on implementing high-impact policies and programmes to reduce NCDs and road injuries *(24)*.

3 **BreatheLife 2030.**

A campaign led by WHO, the UN Environment and the Climate and Clean Air Coalition to mobilize cities and individuals to protect health and the planet from the effects of air pollution *(71)*.

4 **WHO Urban Health Initiative.**

A collaboration of local, national and international partners that works to create demand for action to implement health-enhancing urban policies (61).

5 **The Global Network for Age-friendly Cities and Communities.**

A global network of cities committed to making their cities and communities more walkable, bikeable and liveable places for older populations. Members of the network have access to publications on effective interventions as well as practical toolkits translating research into practice (72).

6 **The Bloomberg Philanthropies Global Initiative on Road Safety (BIGRS).**

This 5-year initiative (2015–2019) aims to reduce fatalities and injuries from road traffic crashes in low- and middle-income countries and cities by strengthening road safety legislation at national level and implementing proven road safety interventions at city level (72).

Common challenges

This section explores a number of common implementation barriers that can risk undermining progress. Fortunately, these problems are rarely unique. The experiences of other cities can help guide others in devising strategies to overcome or mitigate a particular problem.
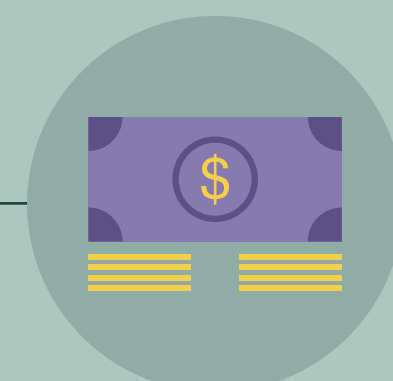
3.1
Industry interference

3.2
Autonomy

3.3
Maintaining political prioritization

3.4
Financing

3.5
Sustainability

Industry interference

3.1 | COMMON CHALLENGES

Whilst sometimes business and industry might contribute to efforts to improve health, in other cases their financial interests are starkly opposed to public health goals. The tobacco industry in particular is extremely aggressive in combating any government action that might discourage smoking and reduce consumption *(74)*.

Groups such as the food and motor vehicle manufacturing industries have made contributions to certain efforts. In **Kuwait City, Kuwait**, dialogue with the food manufacturing and processing industry supported voluntary product reformulation to reduce the salt content of bread in 2013 and snack foods in 2018. The safety of vehicles has also been improved considerably by industry over the last few decades. But in other instances, these industries have fought or undermined health-promoting initiatives, or put in place lifesaving measures only where they are legally required, whilst not doing so in other settings. *(75)*. In cases where their interests clash with those of public health, their size and power can pose a threat to local programmes. Given the risk of negative influences, any form of dialogue should also always be managed with extreme caution and transparency.

Cities have some power to counter industry interference but are at a disadvantage because these industries are large and often comprise extremely powerful transnational corporations. However, local authorities have a number of strategies at their disposal. For example, cities have the power to regulate the use of public land or assets by private companies, and planning approvals that threaten health may be blocked. Support from communities and civil society stakeholders can be invaluable here, giving legitimacy to local authorities, as can be the support of

city networks that can share experiences or that have developed collaborative strategies.

Strong opposition to the negative influences of industries such as tobacco can become part of a leader's political identity. In **Balanga City, Philippines**, the tobacco industry has heavily opposed the city's efforts to protect people from tobacco. Mayor Jose Enrique S. Garcia III was strongly opposed by industry representatives in the city's elections in 2010 and again in 2013, due to his leadership on anti-smoking initiatives. Yet the Mayor used this to justify an even stronger position on tobacco control, making the fight against tobacco a key election campaign issue. He and his supporters in the city council won both elections, solidifying widespread support for their tobacco-reduction initiatives.

Progress against negative industry effects also needs to be monitored over time to protect achievements. After the city of **Howrah in West Bengal, India** received its official smoke-free status in 2017, local authorities were aware that industry front groups would work to undermine the city's efforts, potentially leading to the reversal of their smoke-free designation. To protect their tobacco control policies, Howrah's District Administration enacted Article 5.3 of the WHO Framework Convention for Tobacco Control, a global treaty to help countries limit tobacco *(76)*. Article 5.3 prevents any direct interference from tobacco industry: "In setting and implementing their public health policies with respect to tobacco control, Parties shall act to protect these policies from commercial and other vested interests of the tobacco industry in accordance with national law" *(77)*. By using a global legislative tool to support its city-level work, Howrah was able to block any industry attempts to be involved in tobacco-reduction campaigns or strategies. ●

Autonomy

3.2 | COMMON CHALLENGES

Most cities are (to some degree) subordinate to national and/or provincial legislation. Even when a city has wide latitude in one policy area, it may be tightly restricted on what it can do in another. Often, national legislation will supersede or override local laws or regulations. For example, a national government may establish a national tax policy with little allowance for local leeway. This can make it difficult for municipal authorities to introduce local taxes that may benefit citizen health, such as tobacco levies.

Actions may depend on the level of influence municipal authorities hold over fiscal policies. In the United States for instance, cities and local jurisdictions in some states are able to set different rates for cigarette taxes. **New York City, USA** has a tax of US$ 1.50 per pack of cigarettes, in addition to the New York state tax of US$ 4.35 *(78)*. For cities where independent taxation may not be possible, alternative strategies could focus on areas where municipal authorities do hold more control, such as regulation over how and where these items can be sold. **Bogor, Indonesia**, for example, introduced bans on the display of tobacco products at the point-of-sale in retail outlets across the city in 2017.

National policies may be applied uniformly throughout a country, but in some cases this can prevent the implementation of best practice strategies at city level. For example, when national highway policies are applied in cities, they can result in wider travel lanes and higher vehicle speeds than recommended in a dense urban setting, making safer street design impossible for that area. A national development strategy can also directly impact local health: the introduction of a new highway or airport

in a particular zone can affect air quality, access to walkable or bikeable streets, and the mental health of citizens.

To avoid these scenarios is critical that city authorities establish a good working relationship with national and provincial governments so that these issues can be voiced and addressed. It is sometimes possible for a city to be granted local variances from policies created at higher levels of government. Although negotiating any such deviations can be a delicate and time-consuming process, being able to show evidence of the policy impact and how a variance could bring about health improvements can be persuasive. ●

A stall selling helmets in Hanoi, Viet Nam.
Photo credit: WHO/WPRO/Chau Doan.

Maintaining political prioritization

3.3 | COMMON CHALLENGES

Leadership change risks policies being de-prioritized by the incumbent leader. This poses the familiar problem that interventions are changed or dropped before they have had time to show results. One way of combating this is for interventions to be firmly established as a departmental and political priority, especially where department leadership is not linked to electoral outcomes. Support from civil society sectors is also useful to safeguard a programme's status. While multiple departments and stakeholders may be involved in a project, there should always be

a single agency that owns the outcomes and holds accountability for ensuring delivery.

To avoid being too closely linked to a single political issue or individual, programmes should emphasize their relevance to other themes or priorities. A number of the interventions in this report have the potential for synergistic benefits: for example, the positive effects of traffic reduction on both physical activity and air pollution. Alternatively, programmes could emphasize their relevance to issues outside health, showcasing broader benefits to citizen well-being.

In **London, UK**, the Healthy Early Years London strategy – a programme that recognizes achievements in child health, well-being and education in early years' settings – was aligned with the Mayor's 2018 Health Inequalities Strategy *(79)*. Its positioning as a driver for broader childhood welfare helped the programme gain and maintain political support. External events can also offer an opportunity to raise the political profile of an issue. **Cape Town, South Africa** used the 2018 water shortage crisis as a way to amplify messaging around the importance of clean drinking water. During the drought, a promotional campaign featured messages that emphasized the value of water for the city and for individuals, using this to reiterate why water should be chosen instead of sugar-sweetened beverages.

An image from the Cape Town campaign to raise awareness of the health risks of sugar-sweetened beverages.
Photo credit: City of Cape Town/Vital Strategies.

Intertwining health achievements with a city's identity can also help withstand changes in political priorities. **Fortaleza, Brazil** has achieved this through its cycling programme, which has been recognized nationally as an innovative policy approach to urban mobility that other cities could follow. On 29 June 2018 it won the Sustainable Transport Award from the New York-based Institute for Transportation and Development Policy, reinforcing its international profile as an active city. **Balanga City, Philippines** has made being smoke-free part of its identity and has established its healthy lifestyle programmes as a benchmark. ●

Children play in the streets during a Cycle Day in Bangalore, India. Often on Cycle Days certain streets are temporarily closed to vehicles, making them a safer space for the local community to spend time outdoors.
Photo credit: HealthBridge.

Financing

3.4 | COMMON CHALLENGES

In the overstretched world of public finances, finding resources to run a new programme can be difficult. Levels of fiscal and financial autonomy vary significantly between cities, depending on their relationship with national or provincial authorities.

However, certain policies can be used to improve health outcomes without requiring significant additional investment. For example, streets can be made safer by changing where dividing lines on roads are painted. In some cases, the enforcement of a policy can actually generate revenue, such as higher local levies on tobacco products, or the collection of fines for illegal speeding or drink-driving.

Economic assessments should also be used to help demonstrate the value of an intervention to the city. **Bogor, Indonesia** was able to disprove the claim that banning tobacco advertising would decrease tax revenues by comparing the city's total revenue before and after the removal of such advertising. Looking at data from 2009–2017, it showed that the total ban on tobacco advertising in 2013 did not result in a negative impact on overall funds – revenue had in fact increased from US$ 21.5 million to US$ 33.19 million and continued to see a significant annual increase.

In other cases, economic justifications can be found by coordinating with policies outside the health sector. For instance, a large new highway in a city might be intended to create health benefits for citizens by reducing traffic and air pollution within a particular urban zone. However, at the same time it could have negative impacts on health by blocking neighbourhood access to services, and negatively affecting traffic congestion and air quality in other areas. These

differing impacts would need to be quantified and evaluated to understand the overall health impact and costs arising from the highway. ●

A busy road near the Simon Bolivar station in Bogotá, Colombia.
Photo credit: World Bank/Dominic Chavez.

Sustainability

3.5 | COMMON CHALLENGES

One of the greatest strengths of cities is their ability to act as a test-bed for new ideas. But initial momentum needs to be maintained to ensure that a new programme leads to meaningful long-term impact. Long-term sustainability needs to be supported by a clear vision from city leadership, policies that last beyond a political administration, dedicated budgets to ensure maintenance, and institutionalized application of best practices. It also requires local capacity building and community support, and dedicated monitoring and evaluation.

A city can work with national authorities to trial an approach for scale-up. This was the case in Cotonou, Benin, in 2007, where the Ministry of Health, in collaboration with municipal authorities of Cotonou, piloted the use of the WHO STEPwise survey to collect data on NCD risk factors and assess the usefulness of the data in health planning. Following the results of the city-level survey, which showed the value of the new insights on risk factor prevalence, a national survey was carried out in 2008 and provided the baseline for national targets for NCDs.

In other cases, a city may lead the push for a successful local programme to be scaled up. Collaboration with national counterparts can help promote a city's achievements. Work to reduce the consumption of sugar-sweetened beverages in **Phnom Penh, Cambodia**, saw municipal health authorities work with the National Centre for Health Promotion and the Preventive Medicine Department of the Ministry of Health to ensure that their actions were recognized at national level as the first known instance of a public campaign on the harms of sugar-sweetened beverages in the city.

Most importantly, cities should be able to learn and benefit from each other's interventions. In **Bangalore, India**, the city's Cycle Day concept has spread to other cities in the state of Karnataka. Cochin and Ahmedabad have connected with Bangalore for advice on replicating the concept in their cities. As the largest city in the State of Kuwait, **Kuwait City**'s successful negotiation for popular snacks to contain less salt benefitted all other cities in the country, and similar dialogues to reduce cheese salt content have begun at regional level. Finally, 22 local government units and various universities have visited **Balanga City, Philippines** to learn from its work on implementing effective tobacco control. Peer-to-peer learning is critical to seeing good ideas be shared and scaled up. ●

Conclusion

— Cities can help change public health for the better

Children enjoying healthy snacks at a school in Quito, Ecuador, from a program supported by the *Partnership for Healthy Cities.*
Photo credit: City of Quito/Vital Strategies.

Cities can help change public health for the better. The urban environment directly impacts the health and well-being of people each day, and can help to combat multiple risks for NCDs and road injuries. Local authorities are also key collaborators in promoting national and international agendas.

City leaders hold a significant amount of legislative, administrative and political power to create cities with safer roads, cleaner air, smoke-free spaces and access to healthier food. But city leaders cannot do this alone. To deliver programmes that are effective and sustainable, they need support from governmental ministries, from local partners, from communities, and from national and global allies.

This report is designed to act as a catalyst for that work. By showing what cities can do and why their response matters, it provides the justification that a city leader needs to push for action. By summarizing and signposting technical guidance, it provides a resource for municipal teams to select and develop programmes for their city. And by sharing examples from other cities, it identifies good practices, potential allies, and solutions to common challenges.

The identification and dissemination of best practices is key to understanding what works best in different contexts, which in turn will help future programmes achieve even better outcomes. This report calls cities to continue sharing their experiences and results from working in these areas through networks, with national counterparts, or directly with WHO.

Cities were among the first to implement modern public health practices, and their actions continue to be key to protecting people's health. In the globalized world of the 21st century, local action is as important as ever.

Annex 1:
Technical Resources

WHO has many technical resources that can provide a starting point for cities' efforts to reduce NCDs and road injuries.

The majority of WHO technical guidance and other resources produced has focused on supporting action for reducing NCDs and improving road safety at national level. However, elements of the technical packages can, and have been, successfully adapted for use at city level, and the detail provided on programme development and implementation will be useful for designing city-level interventions. These packages have proven effective in a number of national and regional settings.

A selection of technical packages and associated reports for each intervention area are available as separate WHO publications on the main report web page. ●

WHO resources for intervention-specific guidance
Smoke-free spaces and banning tobacco advertising
• *WHO Framework Convention on Tobacco Control (79)*
• *WHO Framework Convention Guidelines on Smoke-free Spaces (Article 8) ( ) and Tobacco Advertising, Promotion and Sponsorship Bans (Article 13) (31)*
• *WHO Tobacco Free Initiative MPOWER Resources (81)*
• *WHO report on the global tobacco epidemic, 2017 (82)*
• *WHO "Making Cities Smoke-free", 2011 (30)*
Healthy food for all: Reducing consumption of sugar-sweetened beverages and salt
• *WHO Framework for Implementing the Set of Recommendations on the Marketing of Food and Non-alcoholic Beverages to Children (83)*
• *WHO SHAKE technical package for salt reduction (33) – with E (Environment) and A (Awareness) typically the most appropriate for use at a city level*
• *WHO fiscal policies for diet and the prevention of noncommunicable diseases (84)*
• *WHO Dietary Interventions for Appendix 3 of the Global Action Plan for Noncommunicable Disease (85)*
• *WHO Report of the Commission on Ending Childhood Obesity (86)*
• *WHO REPLACE technical package for trans-fat reduction (87)*
Increasing physical activity
• *WHO Global Action Plan on Physical Activity 2018–2030 (37)*
• *WHO ACTIVE technical package (88)*
Reducing air pollution
• *WHO Clean household energy solutions toolkit (89)*
Road safety, speed management and increasing seat-belt and helmet use
• *Save LIVES technical package (42)*
• *WHO manual on drinking and driving policy implementation (90)*
• *WHO manual on traffic speed management (91)*
• *The WHO manuals on increasing use of helmets and seat-belts (92)*
NCD surveillance
• *The WHO STEPwise approach to surveillance (26)*
WHO urban resources
• *WHO Global Report on Urban Health (2)*
• *WHO Global Health Observatory: Data on Urban Health (93)*
• *WHO Health as the Pulse of the New Urban Agenda (94)*
• *WHO Urban Health Initiative (60)*
• *WHO Urban transport and health: sourcebook for policy-makers (95)*
• *WHO Housing and Health Guidelines (96)*
• *WHO Urban Health Equity Assessment and Response Tool (97)*
• *WHO European Healthy Cities Network resources (98)*

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Acknowledgements

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