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ACCESS
FOR ALL
SERIES



POLICIES
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TOD

Access and Babies, Toddlers, and Their Caregivers

Executive Summary



INTRODUCTION



As cities continue to expand and urbanize, they need to consider how to create good environments for young families. Lodwar, Kenya.
Source: ITDP.

More than a billion children live in cities. These children and their families need accessible, inviting, and safe mobility options and public spaces but are not finding them.¹ Cities have not been designed to meet the needs of babies, toddlers, and their caregivers, and mobility systems have not been planned with their travel characteristics in mind. This negatively affects the children's physical, mental, and cognitive development, as well as increases stress on caregivers. If we, however, invest in creating environments that support babies and toddlers, combined with mobility systems that help caregivers provide for their young children, we will create the proper conditions to help them thrive and grow. Investing in babies and toddlers leads to lifelong benefits for them, including educational achievement, positive health outcomes, and higher earnings potential.² Most brain development happens during this period, and the foundation for social, emotional, and physical development is laid. Every dollar invested in early childhood development results in a minimum four-fold return on investment. More importantly, every child has the right to well-being and should be given the opportunity to grow, develop, and thrive in any environment.

We do not have a moment to lose in improving how cities address the needs of babies, toddlers, and their caregivers. By 2050, nearly 70 percent of children around the world will live in urban areas.³ Anticipated migrations due to climate change and conflicts will further increase metropolitan populations.⁴ Already, almost 21.5 million individuals are displaced every year by climate- and weather-related disasters,⁵ the majority of whom being women and children.⁶ The scale and speed of global urbanization and the climate crisis are expected to outpace response, leaving the needs of babies, toddlers, and their caregivers even farther behind. Furthermore, the COVID-19 pandemic has starkly exposed how crucial it is for our cities to provide better environments for the welfare of people. Luckily, solutions exist. Cities could function better for babies, toddlers, and caregivers by increasing access to the specific needs and destinations they require for daily living through integrating land use and transportation, while improving their local environment. This report examines how to achieve this.

1 UNICEF, [Growing cities](#), accessed July 28, 2020.

2 Heckman Equation, [Four Big Benefits of Investing in Early Childhood Development](#), accessed November 1, 2021

3 UNICEF, [Growing cities](#), accessed July 28, 2020.

4 United Nations, [Make cities and human settlements inclusive, safe, resilient and sustainable](#), 2019.

5 United Nations, [Frequently asked questions on climate change and disaster displacement](#), 2016.

6 UN Women, [In focus: Climate action by, and for, women](#), accessed November 1, 2020.

ABOUT THIS REPORT



Child-friendly streets of urban kampung in Jakarta, Indonesia.
Source: ITDP.

Access and Babies, Toddlers, and Their Caregivers is the second installment in the *Access for All* series that distills common messages of inclusion, equity, and access, along with providing solutions to improving those through sustainable transport and urban development. In this brief, the Institute for Transportation and Development Policy (ITDP) and the Bernard van Leer Foundation teamed up together to explore the mobility needs of babies and toddlers (0-5 years old), as well as their caregivers. It provides key recommendations for stakeholders from civil society, subnational authorities, donor organizations, and national governments to take action to improve the well-being and development of babies, toddlers, and their caregivers through improving access. This executive summary distills the key points, but the full report, found at www.itdp.org/publication/access-for-all goes into more depth.

Early childhood development is central to laying the foundation for lifelong health and well-being. Good urban conditions influence the quality of care, and good access is needed to fulfill the developmental needs of young children and relieve the burden on caregivers. This brief looks more deeply at the intricacies of daily caregiving behaviors, from basic needs to mobility characteristics. To meet the needs of babies, toddlers, and caregivers, this report defines two key frameworks for enabling access: the **15-minute neighborhood** and **10-minute public transport**. Finally, with these frameworks as the foundation, the report concludes with recommendations for how to implement them.

BABIES, TODDLERS, AND THEIR CAREGIVERS



Access for babies, toddlers and their caregivers means having healthy places where loving interactions and play can take place. It also means convenient mobility options to abundant local services. Guangzhou, China. Source: ITDP.

The early years of childhood, from birth to age five, lay the foundation for social, emotional, cognitive, and physical development for the rest of a person's life.⁷ These are the brain-building years. During these early years, the brain is at its most sensitive to external experiences and input than at any other time in life.⁸ According to UNICEF, more than 80 percent of a baby's brain is formed by the age of three, including the neural connections that shape language skills, cognitive functions, and sensorial capacity. These early years have a profound, lasting impact on a person's future physical health and mental well-being.⁹

⁷ UNICEF, [Why early childhood development](#), accessed November 1, 2020.

⁸ Urban95, [An Urban95 starter kit: Ideas for action](#), 2019, 5.

⁹ UNICEF. Early Childhood Development: [Building your baby's brain](#). Accessed July 13, 2021.

Two of the most important factors for child well-being and development are (1) safe and stimulating physical environments to explore and (2) frequent, warm, and responsive interactions with loving adults.¹⁰ Providing safe and stimulating physical environments includes ensuring opportunities for play in environments that are conducive to the health and well-being of babies and toddlers, free from threats of urban violence and road crashes. Moreover, babies and toddlers are particularly sensitive to environmental conditions and susceptible to factors that can impede their healthy cognitive and neurological development—such as poor air quality and noise pollution.

Fundamentally, though, the well-being of babies and toddlers rests on the well-being of their caregiver. Frequent, warm, and responsive interactions with loving adults—including playing together, storytelling, singing, reading, or talking—are key to building the brain architecture that creates the foundation for socio-emotional development and language evolution. Caregivers are also responsible for the physical well-being of the children they care for, including health and nutrition, basic hygiene, and safety, inclusive of nonviolent approaches to discipline.¹¹ The main factor in a caregiver's ability to have warm and responsive interactions is having the time and resources to do so, which means having easy and convenient access to essential needs and services. The mental health of caregivers influences their interactions with the babies and toddlers in their care. Mental health can be affected by a combination of many factors: social isolation, stress, postpartum depression, anxiety, and violence, to name a few. When caregivers are affected by intermittent or chronic stress or depression, they will be less able to respond to and interact with the children in their care, and it may limit their ability to seek services for the children.¹² The more stressful the environment, the more stressed the caregiver will be, resulting in either transmitting that stress to their young children or hampering the quality of their interactions with them. Moreover, chronic stress and isolation can be compounded by their environment and their access to opportunities.

The built environment affects early childhood development directly through the quality of the environment that babies and toddlers are exposed to and their opportunities to interact with it and indirectly by modulating interactions between babies or toddlers and their caregivers.¹³

¹⁰ Urban95, [An Urban95 starter kit: Ideas for action](#), 2019, 8.

¹¹ Urban95, [An Urban95 starter kit: Ideas for action](#), 2019, 12–17.

¹² Urban95, [An Urban95 starter kit: Ideas for action](#), 2019, 12–17.

¹³ Urban95, [An Urban95 starter kit: Ideas for action](#), 2019, 5.

NEEDS OF BABIES, TODDLERS, AND THEIR CAREGIVERS

Babies, toddlers, and their caregivers have particular needs for services that are enabled by land uses and zoning, as well as unique ways of moving through the city that are enabled by mobility options. It is the interplay between these two that enables how well babies, toddlers, and their caregivers can access what will help them thrive and develop.

The Particular Needs of Babies, Toddlers, and Their Caregivers	The Unique Mobility Characteristics of Caregivers Traveling with Babies and Toddlers
<ul style="list-style-type: none"> • Water, sanitation, and hygiene (WASH) locally • Local fresh food sources, including grocery stores, small shops, and informal produce stands • Open spaces, including parklets, plazas, green areas, and playgrounds • Healthcare services and pharmacies • Daycares, kindergartens, and primary schools • Employment options • Cultural and community centers, including social services • More specialized services and shopping 	<ul style="list-style-type: none"> • Dependent mobility, as babies and toddlers travel with caregivers • Carrying goods • Shorter trips, more often • Slower walking speeds • Frequent stopping • Higher risk aversion • Limited time • Trip chaining • Off-peak travel to noncommercial destinations • Affordability

These needs include access to basic WASH services, such as water and sewage, good nutrition, opportunities for play and activity, educational opportunities, and services like healthcare, among others, on a frequent basis. Good sanitation and hygiene are fundamental to protect babies and toddlers from infection while their immune systems are developing. Water is needed for bathing, cooking, and cleaning. Basic nutrition and healthy eating habits are fundamental to growth and development and set the foundation for lifelong health. UNICEF reports that 75 percent of each meal goes to a baby's healthy brain development,¹⁴ which means that access to quality produce and other food is important for breastfeeding mothers and growing babies and toddlers. Young children also need to play and

¹⁴ UNICEF, [Parenting tips for the first two years of life](#), accessed October 28, 2021.

explore. Play is the building block for learning because it builds brain architecture, including the development of motor, cognitive, and socio-emotional skills. Having open space for social interaction, physical movement, exploration, and play is essential for babies and toddlers to develop their social and motor skills. Spending time outside in green areas and on streets has numerous positive impacts on health for both young children and caregivers.¹⁵ Access to medical services is also critical to health and well-being. Pregnant women, babies, and toddlers have a greater need for these medical services because of more frequent doctor's visits—as often as monthly or weekly near the time of birth, to every couple of months in the first years of life.

Neighborhood markets provide healthy nutrition for families. Fez, Morocco. Source: Just Another Photographer via Shutterstock.



Every child has the right to high-quality childcare. Participation in high-quality early childhood programs has been linked to lower levels of depression and obesity later in life, higher chances of completing primary and secondary education, and 25 percent higher incomes in adulthood.¹⁶ Since caregivers may be responsible for multiple children, having daycares and primary education facilities nearby helps them accomplish the competing demands of the household. Daycare also enables caregivers to hold a job. They often work to help meet the needs of the household. Because of the challenges of childcare, many caregivers need employment options nearby to facilitate picking up and dropping off children at daycare, schools, and after-school activities, as well as enable them to respond to emergencies, such as a child's illness. Finally, caregivers, babies, and toddlers need access to social and cultural services, such as libraries and community centers. These are places where caregivers can find support systems, and babies and toddlers get access to programming, educational opportunities, and socialization.

¹⁵ Marc G. Berman et al., *The cognitive benefits of interacting with nature*, 2008.

¹⁶ U.S. Council of Economic Advisers, *The economics of early childhood investments*, 2015, 21.



High-quality childcare is critical to both early childhood development and to enabling economic and job opportunities for caregivers. Source: Jon Spaul / Bernard van Leer Foundation.

Neighborhood characteristics also affect the health of young children and can reinforce socio-economic disparities and exclusion that affect health outcomes. Disinvestment in communities—including a lack of basic services, open spaces, and neighborhood facilities—or locating low-income developments in inaccessible or underserved areas causes stressful lifestyles and exposes young children to potential negative impacts. Basic infrastructure—such as streets, sewage, water, and sanitation—forms the foundation for well-functioning neighborhoods and is the cornerstone of daily family activities such as washing, bathing, or cooking. These services are also critical in responding to crises, such as extreme weather like flooding and even pandemics.

These needs and services are central to early childhood development, from nutrition and health to spaces for play and socialization. Proximity to these services determines how often caregivers can access them, whether outdoor play is facilitated, and how well young children's needs can be met within the limited time and financial budget that many caregivers have. Having services nearby also helps lower stress and duress for caregivers, which can, in turn, allow more opportunities for loving and warm interactions. Proximity to a mix of services is critical, but more and more, cities are becoming sprawling places where it is harder to find these services nearby. Current land use and urban development reveal a fragmented landscape that results in caregivers embarking on strenuous trips to meet the needs of their young children and household, in environments that are polluted, congested, and unsafe. With haphazard urban growth and sprawl, local access and healthy, walkable neighborhoods are not the norm in most cities.



Essential destinations located nearby mean short distances and convenient travel. Caregiver walks with her child to kindergarten in Dar es Salaam, Tanzania. Source: ITDP

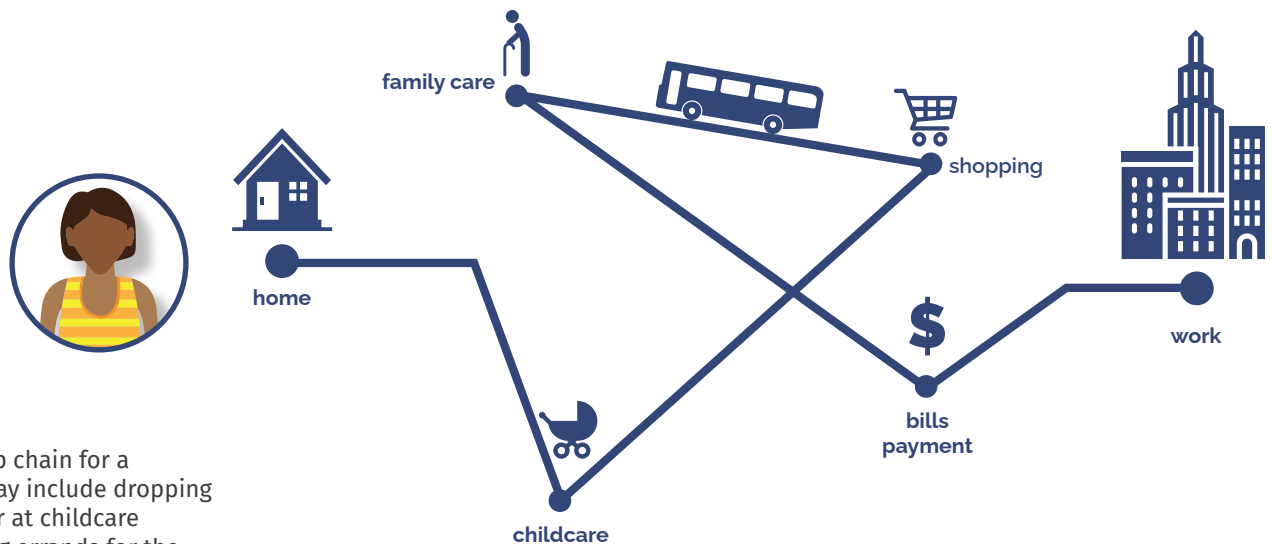
In addition to these particular needs, babies, toddlers, and caregivers have unique ways of moving through the city, which affects their ability to reach essential destinations. The way in which babies and toddlers move through the city is dependent on their caregivers, as young children never travel alone. The first lens to understand how caregivers move through the neighborhood and city is that they represent a range of identities, including age, ability, gender, race, and income, among others, which influences where they feel safe and what they have access to. More generally, caregivers also have specific travel characteristics and needs, based on the types of trips they need to take, when they take them, and under what conditions. These taken together, coupled with the mobility options and conditions determine how caregivers navigate through their daily routines and caregiving duties to access the needs and services that they and their families require.

One of the major determinants of how caregivers travel is whether they are making trips with or without a baby or toddler. When traveling with a baby or toddler, caregivers often make shorter trips, move more slowly, stop more frequently, and have a lower tolerance for unsafe or insecure environments. This is, in part, because toddlers walk more slowly and require more breaks, and babies need to sleep and eat more often. Also, traveling with young children is a chance for them to discover and experience the environment, which aids in their development, but may slow the trip down. Often, caregivers will also travel with other members of the family, which can result in slower and more expensive trips. As they travel with babies and toddlers, caregivers will need to carry supplies, like food, clothing, diapers, and toys.

Walking is a fundamental
form of mobility for
caregivers traveling with
babies and toddlers.
Monterrey, Mexico.
Source: Héctor Ríos.



Regardless of with whom they are traveling, caregivers tend to trip chain, where multiple destinations are combined into one journey, as caregivers tend to be time-constrained and need to accomplish many activities related to the maintenance of the household. Caregivers often travel in off-peak hours to non-commercial destinations, including medical appointments, dropping off or picking up children, and places of employment. Generally, these types of households are more financially constrained, and affordability is a crucial factor in mobility decisions.



A typical trip chain for a caregiver may include dropping off a toddler at childcare then running errands for the household before going to work. Source: Women and Children's Access to the City, ITDP, 2018.

Because of this, caregivers need reliable, flexible, affordable, and safe transportation, but are often not finding mobility options to meet their needs, which increases the costs, duress, and stress of meeting basic needs. Most transportation planning centers the non-disabled, male commute, and care trips are largely invisible in transportation planning. For most of the past century, streets have been designed for motorized vehicles and their throughput, often displacing other modes of transportation like walking, cycling, and public transport, along with degrading the quality of the environment for all street users. This has resulted in the prioritization of motorized modes and peak public transport service, leaving caregivers with reduced mobility options, from what modes are available to the dimensions of travel, like affordability, quality, safety, and ease of use.

Air pollution is a major threat to babies and toddlers, considering they breathe polluted air into their developing lungs more quickly than older children and adults. Source: Health. huanqiu.com.



Car-oriented infrastructure produces unhealthy street environments for babies, toddlers, and their caregivers by decreasing open space, increasing localized air pollution and noise pollution, and increasing the possibility of injury or death from road crashes. Traffic is one of the leading causes of air pollution in a city. Poor air quality disproportionately affects young children, and acute lower respiratory infections are the second leading cause of death for children under five years old.¹⁷ The negative impacts of air pollution on cognitive development and physical health for babies can start as early as the womb. About 18 percent of total preterm births were associated with exposure to fine particulate matter (PM_{2.5}).¹⁸ Traffic also contributes to noise pollution, which degrades the environment and affects the cognitive development of young children. Finally, because of the speed and number of motor vehicles, as well as a lack of street space for walking, cycling, and public transport, road safety is a top risk and concern for families. Road traffic injuries are the leading cause of death for children and young adults between the ages of five and 29 years old.¹⁹ Globally, low- to middle-income countries account for 93 percent of child road deaths.²⁰ The overdominance of private motor vehicle planning has left our streets more dangerous and polluted and our cities less accessible. Moreover, globally, most caregivers do not have access to private motor vehicles.

Walking, cycling, and public transport all confer more benefits to babies, toddlers, and their caregivers than private motor vehicles, in addition to being cleaner. These benefits include increased opportunity to interact with each other and their environment, more physical activity, and being able to support a density of activities and destinations nearby. Designing streets for multiple sustainable mobility options would give caregivers options to be able to meet their needs, while also creating the most cost-effective, efficient, and resilient types of streets. Despite the potential of sustainable modes to improve access, current conditions for these types of transportation largely fail to engender a clean, safe, and inviting environment for young children and their caregivers, mainly because motor vehicles have been the priority in street design or because services are too far away. Following is a summary of the opportunities and challenges that walking, cycling, and public transport pose for caregivers traveling with young children.

Cycling with a baby or toddler can be a time for interaction and engagement for young children with their environment. Osaka, Japan. Source: ITDP.






17 World Health Organization, *Number of deaths in children aged <5, by cause*.

18 Christopher S. Malley et al., *Preterm birth associated with maternal fine particulate matter exposure: A global, regional and national assessment, 2017*, 173–82.

19 World Health Organization, *Road traffic injuries, 2020*.

20 World Health Organization, *Road safety-speed, 2020*.

	Opportunities	Challenges
<p>Walking</p> 	<ul style="list-style-type: none"> • Good for shorter distances • Reliable and predictable • Simpler planning required • Flexibility to stop and attend to a child or to take a break • Opportunities for interactions between the caregiver and baby or toddler • Furthers brain development by stimulating the senses • Physical activity for both young child and caregiver • Affordable 	<ul style="list-style-type: none"> • Discontinuous, poorly maintained, or nonexistent walkways • Narrow, overcrowded, or obstructed walkways • Chaotic crossings • Poor local environmental conditions, such as air and noise pollution, fast traffic, no shade or seating, lighting, etc. • Distances too long
<p>Cycling</p> 	<ul style="list-style-type: none"> • Good for longer distances • Reliable, flexible, and predictable • Simpler planning required • Opportunities for interactions between the caregiver and baby or toddler • Furthers brain development by stimulating the senses • Physical activity • Greater carrying capacity 	<ul style="list-style-type: none"> • Lack of connected and protected cycling infrastructure • Dangerous intersections • Lack of protected and safe bike parking • Lack of child-friendly bicycles and accessories and those that do exist may be expensive • Gender bias, harassment, and violence
<p>Public Transport</p>  <p>Includes all forms, from intermediate, informal, and mass public transport</p>	<ul style="list-style-type: none"> • Good for longer distances • Faster and more comfortable travel with goods and family • Opportunities for interaction with young children • Connects to more specialized services • Perception of safety 	<ul style="list-style-type: none"> • Poor service planning for caregiving activities • Revenue and fare models that disincentivize caregivers • Overcrowding and lack of space for waiting or seating • Systems that are not easy to use • Risk to personal security • Lack of universal access at stations and in buses

The availability of sustainable transport options, their quality, and the environmental conditions can enable travel to places of employment, services, and open spaces that are important to young children and their caregivers.

Diverse options would help with giving caregivers the most flexibility to make trips near and far, especially when city fabrics necessitate longer distances to these destinations and considering that they often travel in less-than-ideal conditions and are encumbered with carrying supplies. Walking is the most flexible, affordable, and accessible mode of transport. It also gives toddlers and babies more opportunities for physical activity and cognitive development. Given the demands on caregivers, walking would ideally be the first and best choice to fulfill the needs of babies and toddlers, but it only works well if services are nearby and walking conditions are good. Cycling can expand what is accessible fivefold, while providing many of the same benefits as walking. Public transport—whether it be shared 2- and 3- wheelers, minibuses, buses, bus rapid transit, or rail—is the lifeline of cities and often anchors neighborhood activity because more businesses, shops and job opportunities can be found nearby. Public transport can expand what is accessible tenfold and may be preferred when traveling with young children and carrying goods, and when it is necessary to reach services that are farther away.



A caregiver with her child easily alights from a bus in Pune, India. Source: ITDP.

Caregivers Moving Through the City

Primary caregivers often include parents, older siblings, grandparents, or pregnant women.



Caregivers walk to places near and far, often traveling with multiple children under their care.



Multitasking caregivers make daily journeys with their young ones for various purposes, such as to a doctor's office, a grocery store, or even for employment.



Caregivers traveling by bike can travel with multiple children in multiple ways and in conditions ranging from mixed traffic to protected cycle lanes.



Caregivers use intermediate public transport, like auto-rickshaws, to take longer or more complicated trips with their young children and other family members.



Caregivers using public transport have to navigate getting on and off the vehicle usually while carrying a child or with goods.



ACCESS AND MOBILITY FOR BABIES, TODDLERS, AND CAREGIVERS



Cycling can be an efficient and convenient form of transportation for caregivers if it can accommodate travel with children and goods. Bogotá, Colombia. Source: Carlos Felipe Pardo.

Babies, toddlers, and their caregivers have specific needs for good growth, development, and well-being that can be facilitated only when land use and transport are integrated. Improving access is at the very heart of what a city needs to foster for early childhood development and caregiver well-being. To create better access for babies, toddlers, and caregivers, we need to:

- Prioritize proximity to basic needs and particular services needed by babies, toddlers, and caregivers.
- Provide a multiplicity of sustainable modes of transportation that begins with a good walking environment.

Our neighborhoods need to deliver on both. Outside the home, the neighborhood is the most important space for babies, toddlers, and their caregivers. For timebound and time-constrained caregivers, having destinations nearby and a safe built environment mean they are able to travel with less stress, while having more opportunity and space to engage and play with their young children. For babies and toddlers, who sleep and feed frequently and have a lower ability to handle long trips, proximity also matters. They need stimulating and safe environments and open space nearby that facilitate play and development. Satisfying the diversity of services, while also delivering a high-quality pedestrian environment and public realm, is the foundation of access, which will enable caregivers, babies, and toddlers to thrive.

Access has additional dimensions that need to be factored in to understand what is truly accessible; these factors include the following:

- **Affordability:** the price of mobility services and the price of services like childcare, healthcare, and food
- **Safety:** personal security from violence and harassment, as well as safety from vehicular crashes
- **Service quality:** the reliability, frequency, cleanliness, and comfort of public transport and the quality and quantity of services such as childcare

For example, a person does not have true access if they are physically close to public transit that comes just once an hour; that is overcrowded, encouraging pickpocketing or harassment; or that the person cannot afford to use. Thus, true accessibility is actually quite limited. While we focus primarily on the spatial dimensions of access as the necessary first step to improving access in this paper, these other dimensions need to be addressed to ensure real access.

Access through the proximity of a mix of services and a mix of mobility options shapes caregivers' child-responsive behaviors and subsequently the well-being of babies and toddlers. To enable caregivers to provide for babies and toddlers, we need to strengthen local living at the neighborhood level with a multiplicity of mobility options, with public transport as the vital lifeline to the rest of the city. We need to improve access.

RECOMMENDATIONS



10-minute public transport and the key elements of 15-minute neighborhoods support the well-being of families in cities. Bogotá, Colombia. Source: Carlos Felipe Pardo.

The frameworks for improving access for babies, toddlers, and their caregivers are:

- **15-minute neighborhood:** access to essential services and basic needs within 15 minutes
- **10-minute public transport:** access to the rest of the city by way of public transport that comes at least every 10 minutes throughout the day

A **15-minute neighborhood** is a vision for how neighborhoods can meet the needs of babies, toddlers, and those who care for them. It recognizes that caregivers have limited time and that babies and toddlers have limited ability to travel far from home and need a safe, clean, and good quality public realm nearby. Secondly, 10-minute public transport is the vision for how public transport can work for caregivers traveling with babies and toddlers. Each key recommendation has several sub-recommendations, which are the many pathways to achieving the vision of a 15-minute neighborhood or a **10-minute public transport** system, since most places are currently far from embodying these ideals. Cities need options for improving access for babies, toddlers, and caregivers, and these recommendations provide them.

The most important thing is to make it easier to care for babies and toddlers and to contribute to their health and development, while lowering stress for caregivers. These recommendations will create a better enabling environment for babies and toddlers and their caregivers, but they are just the beginning for improving early childhood development. These conditions are necessary but still not sufficient in enabling families to thrive.

15-MINUTE NEIGHBORHOOD

Neighborhoods function as extensions of the home, where young children and their caregivers spend significant amounts of time. In 15-minute neighborhoods, families can easily access local services, places to play, and mobility options.

Tirana, Albania.
Source: Cecilia Vaca Jones/Bernard van Leer Foundation.



A **15-minute neighborhood** is broadly understood as one where people have the ability to reach daily services that facilitate local living within 15 minutes, as well as reach public transport that facilitates connection to the rest of the city. The five key objectives of the 15-minute neighborhood are:

1. **The basics:** Ensure basic utilities and public infrastructure systems that support the daily lives of families and allow for safe and convenient mobility are in place.
2. **Local mobility:** Make walking and cycling the preferred and most comfortable mode of local travel for babies, toddlers, and those who care for them.
3. **Local destinations:** Ensure key caregiving destinations are within walking or cycling distance of a mix of housing types, creating inclusive neighborhoods for all families.
4. **Local play:** Enable play by creating safe and healthy open space in the public realm.
5. **Local environment:** Reduce environmental stressors from motor vehicles by slowing speeds, reducing car use, and shifting space from cars to people.

For babies, toddlers, and those who care for them, the neighborhood should be grounded in **walking**, but often, neighborhoods are not walkable. Many destinations are unreachable within a reasonable walking distance, and the conditions for walking are poor. Thus, the first priority is to meet the needs of babies and toddlers within 15 minutes, no matter the mode. Given the deficiency in many neighborhoods, 15 minutes can and will need to be achieved by other modes, especially cycling and public transport. Ideal access would mean that essential needs and services would be found within a 15-minute, 500-meter walk. Good access would be having essential needs and services easily and safely accessible within 1 kilometer by walking, cycling, or public transport. Baseline access would be 15-minute access by all sustainable modes, including cycling and public transport, within 2.5 kilometers. See below illustration to understand the tiers of access afforded by different mobility options.

The 15-minute neighborhood is not meant to be understood as a distinct, self-contained area or a self-sufficient enclave. Rather, it is a space connected to other neighborhoods of all sizes and the rest of the city through a range of modes and transport systems. At the core, 15-minute neighborhoods should be a measure of inclusive access for everyone, including babies, toddlers, and caregivers.

Tiers of Access within 15 Minutes

Baseline

Essential needs and services are within **2.5 kilometers** and easily and safely accessible by public transport or cycling

2.5 km

Good

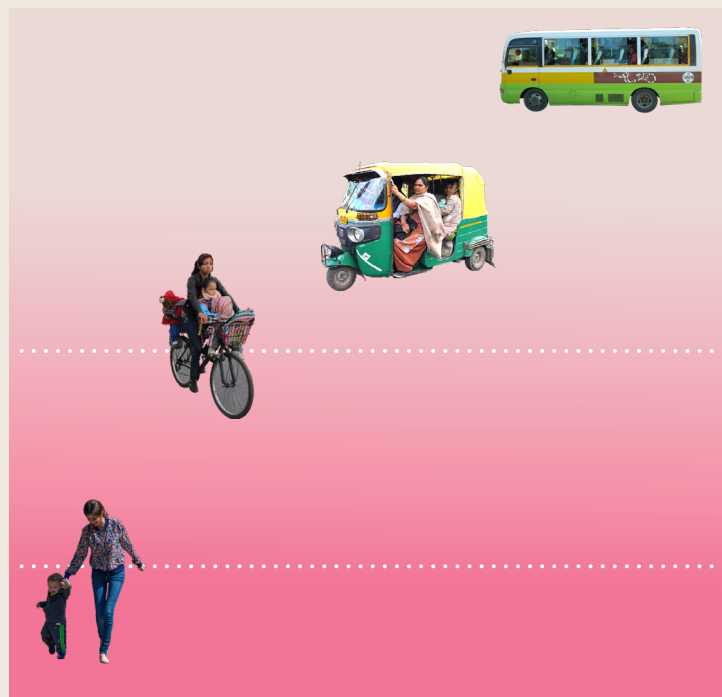
Essential needs and services are within **1 kilometer** and easily and safely accessible by walking, cycling, and public transport

1 km

Ideal

Essential needs and services are within **500 meters** and easily and safely accessible by walking

500 m



15 minutes
distance
from home

10-MINUTE PUBLIC TRANSPORT

A well-designed transport system for caregivers traveling with young children is one where all the elements, from the network to the stations to the vehicles, work together to create safer, more comfortable, and more efficient journeys.

Source: ITDP.



Ten-minute public transport is one where people have no more than a 10-minute wait for public transport that is within a walkable distance. While a 15-minute neighborhood addresses the need for key destinations nearby, public transport is the vital connection between the neighborhood and the rest of the city. Moreover, in many neighborhoods where there are few to no services close-by, caregivers may have to travel farther to reach key destinations.

Quality public transport enables access for caregivers traveling with babies and toddlers, and that quality is grounded in service—its reliability, affordability, accessibility, safety, and ease of use. To achieve this, the building block is frequent service: 10-minute public transport. The five key objectives of 10-minute public transport are:

1. **Network and service design:** Ensure caregivers can travel easily, comfortably, and safely throughout the neighborhood and city.
2. **Station and stop design:** Plan stops and stations to be accessible and good environments for caregivers traveling with babies and toddlers.
3. **Safety:** Improve personal security for caregivers traveling with young children.
4. **Fare policy:** Increase accessibility and ease of use through an equitable fare policy.
5. **Integration:** Increase accessibility and ease of use through integrated transport systems that facilitate trip planning and navigation.

Public transport is the backbone of a city, enabling access to destinations near and far. It supports activities located around transport nodes, which in turn drive more visitors and users of public transport. For caregivers, good public transport is affordable, reliable, accessible, safe, easy to use, and healthy. Most of all, public transport should respond to caregivers' mobility needs, such as comfortable journeys with their young children and goods, personal security, and off-peak travels.

POLICIES AND PROCESS OF IMPLEMENTATION

Tactical urbanism projects, such as this pop-up plaza in Istanbul, Turkey, can help create safe and engaging spaces for families, as well as stimulate buy-in towards permanent interventions. Source: Pinar Gediközer.



The **15-minute neighborhood** and **10-minute public transport** provide the frameworks to help improve the well-being of babies, toddlers and the people who care for them grounded in their needs for safe and convenient mobility, playful and healthy environments, and access to local destinations. These frameworks help diagnose where cities and neighborhoods are now, identifying gaps in our urban development and transport systems in meeting the needs of caregivers, babies, and toddlers, as well as delineate where they need to go by providing solutions for how to improve. Once we understand what we need to do, below are recommendations for implementing improvements in access, including the processes and policies that can help realize these frameworks:

1. **Participatory planning:** Plan with the community, specifically incorporating the perspectives, needs, and interests of babies, toddlers, and their caregivers into the planning process and policy frameworks.
2. **Data:** Collect qualitative and quantitative data for care trips and travel patterns.
3. **Capacity building:** Provide opportunities for decision makers, transport and city agencies, and operators to learn about the needs of young children and their caregivers.
4. **Test and revise:** Produce pilots and generate community input and buy-in around programming for babies and toddlers in order to scale up larger projects.
5. **Scale:** Implement sustainable urban development and mobility policies and programs and ensure that they are funded across government by institutionalizing the needs of caregivers, babies, and toddlers.

Local community participates in the upgrading of footpaths and pedestrian stairways in a hilly neighborhood of Lima, Peru. Source: Asociación Proyecto Alto Perú.



These process and policy recommendations aim to shed light on the needs of babies, toddlers, and caregivers by bringing them into the planning process and by collecting data on their trips and their needs. The recommendations recognize that most transport and urban planning professionals are not taught to consider these needs or the unique ways that young children and caregivers move through cities. Thus, building awareness and capacity, as well as experiential learning opportunities, are critical to helping mainstream babies, toddlers, and caregivers into the planning process. Finally, these recommendations consider short-term and long-term implementation approaches, encouraging quick-build and quick wins through pilots and demonstration projects, while also recognizing that in order to make these issues mainstream, it is necessary to embed the needs of babies, toddlers, and caregivers into policies and programs.

A strong focus on participatory planning, data collection, capacity building, and pilots can lead to the implementation of inclusive and sustainable urban development and mobility frameworks. Local agencies need enough capacity to be able to coordinate and adopt policies with a cross-cutting lens of gender, public health, and climate change. Whatever the approach, cities will need to focus on the needs of caregivers and young children, and initiatives until they are mainstreamed into public processes and part of public awareness.

For more detail on all these recommendations, please look at the Summary of Recommendations section.

CONCLUSION

Bringing babies, toddlers, and caregivers into the planning and design of public spaces, including the streetscape—like in Tel Aviv, Israel—is critical to rebuild our cities for the future. Source: Courtesy of Nadel Roizin Architects.



Babies and toddlers have traditionally not been considered by the people who plan and design cities, public spaces, and transportation systems. Indeed, historically and almost universally, young children are somehow seen as an extension of their mothers and are relegated to the private realm, largely invisible in city and transportation planning. This gap has translated into a lack of urban planning practices designed to meet the needs of young children and caregivers. To address this gap we must incorporate them into public planning processes; plan for them in the public realm; and address their needs in using public space, including streets, and addressing their needs in public transportation systems. We need to redefine “the public” to intentionally include and actively support babies and toddlers and those who care for them, recognizing that infancy is the most critical period in human development and that public space plays an important role in shaping that development.

These frameworks and the recommendations for implementing them, which are presented in this paper, aim to rectify this gap and to realize tangible improvements to access and well-being for babies, toddlers, and their caregivers. The full paper (found at www.itdp.org/publications/access-for-all) goes into more depth about every aspect covered in this executive summary and offers more guidance on all the recommendations (see the following summary of recommendations) to help decision makers, policymakers, practitioners, and advocates take steps to improve access and the well-being and health of babies, toddlers, and caregivers. Their future depends on our actions now.

SUMMARY OF RECOMMENDATIONS

15-Minute Neighborhood

1. The basics:

Ensure basic utilities and public infrastructure systems that support the daily lives of families and allow for safe and convenient mobility are in place.



1.1. Provide basic urban services in good supply:

- Water
- Stormwater management
- Sewage
- Solid waste management
- Electricity

1.2. Ensure access to public transport:

- Intermediate public transport
- Informal public transport
- Buses and rail

1.3. Ensure short blocks and sufficient public right-of-way for streets and open space:

- 30–50 percent of total land area in the city is public space, including street network
- Block length is 110 meters on average

2. Local mobility:

Make walking and cycling the preferred and most comfortable mode of local travel for babies, toddlers, and those who care for them.



2.1. Provide a safe and continuous network for walking and cycling:

- Continuous and connected routes
- Dedicated and protected space
- Small blocks

2.2. Create universally accessible, comfortable, and safe walking conditions:

- Smooth, wide, and paved walkways
- Unobstructed and protected walkways
- Good lighting, shade, and seating
- Active frontages
- Well-marked and well-lit crossings

2.3. Ensure safe, accessible, and convenient cycling:

- Wide and safe lanes
- Safe intersections
- Bikeshare
- Bike parking
- Child-friendly bikes and accessories

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2.4. Promote and encourage walking and cycling through targeted programming:

- Programming and prioritizing of children's routes
- Car-free days and organized bike rides
- Cycling classes for caregivers and toddlers

3. Local destinations:

Ensure key caregiving destinations are within walking or cycling distance of a mix of housing types, creating inclusive neighborhoods for all families.



3.1. Ensure a diversity of key services and opportunities within walking or cycling distance:

- Mix of residential and non-residential activities
- Informal vending
- Mobile and pop-up services
- Clustered and co-located services

3.2. Provide for and protect local business and street vending:

- Small business support and preservation
- Informal vending

3.3. Ensure a diversity and density of housing types:

- Upgraded informal housing
- Public and social housing
- Affordable housing policies
- A diversity of housing allowed by right

4. Local play:

Enable play by creating safe and healthy open space in the public realm.



4.1. Increase access to and activate open space:

- Diverse and frequent open spaces
- Activation for different ages
- Educational programming for different ages

4.2. Activate streets for play:

- Parklets
- Open streets
- Play streets
- Play elements in the streetscape

4.3. Invest in green infrastructure to increase the quality of open and play spaces:

- Trees and street landscaping
- Bioswales
- Green spaces

5. Local environment:

Reduce environmental stressors from motor vehicles by slowing speeds, reducing car use, and shifting space from cars to people.



5.1. Slow cars and improve safety through policies and design:

- Safe street design
- Traffic calming
- Slow zones and low speed limits
- Vision Zero

5.2. Reduce polluting private motor vehicle use to improve air and environmental quality:

- Dedicated public transport lanes
- Low- or zero-emission zones
- Pricing mechanisms (congestion, on-street parking)
- Limiting of through traffic
- Elimination of off-street parking requirements

5.3. Reclaim street space from cars for open space:

- Narrowing of mixed traffic lanes
- Curb extensions
- Tighter turning radiuses
- Conversion of parking space
- Streets as parks

10-Minute Public Transport

1. Network and service design:

Ensure caregivers can travel easily, comfortably, and safely throughout the neighborhood and city.



1.1. Develop a connected public transport network grounded in a fine-grain street network:

- Fine-grain street grid
- Integration with other forms of public transport

1.2. Provide frequent, all-day service with extended hours of operation:

- 10-minute all-day frequency
- Extended hours of operation
- Weekend service

1.3. Dedicate space for public transport in the roadway:

- Dedicated lanes
- Transit-only streets (i.e. transit malls)

1.4. Provide vehicles that allow caregivers, babies, and toddlers to travel safely and comfortably together:

- Priority seating for families in vehicles
- Newer vehicles or cleaner technology
- Level boarding

2. Station and stop design:

Plan stops and stations to be accessible and good environments for caregivers traveling with babies and toddlers.



2.1. Dedicate space for well-maintained, safe, and comfortable stops and stations:

- Ample space
- Seating
- Shade and weather protection
- Colocated public facilities

2.2. Enable safety and comfort of journey through universal access:

- Ramps into station or to access stop
- Level boarding
- Wide turnstiles

2.3. Incorporate green infrastructure into station and stop design:

- Green infrastructure: bioswales, green roofs
- Nature elements: landscaping

2.4. Enhance well-being by adding play elements to a station or stop:

- Bright colors
- Play elements at height of toddler
- Colocated play areas near stops

3. Safety:

Improve personal security for caregivers traveling with young children.



3.1. Design stations and stops to increase sense of personal security:

- Lighting
- Transparency
- Clear sightlines

3.2. Develop policies and protocols for reporting crime and harassment:

- Panic buttons
- Public safety personnel
- CCTV

3.3. Train staff and promote public education around gender and urban violence and the specific needs of caregivers:

- Workshops for transport staff
- Public education campaign

4. Fare policy:

Increase accessibility and ease of use through an equitable fare policy.



4.1. Implement equitable fare policies that allow for trip chaining:

- Targeted discounts
- Free fares for children
- Fare capping
- Free transfers within a window of time

4.2. Make boarding and alighting easier for caregivers with off-board fare collection:

- Barrier control
- Ticket vending machines or kiosks
- Proof of payment

4.3. Ensure fare compatibility and integration across multiple services:

- Common fare medium
- Integrated fare policy

5. Integration:

Increase accessibility and ease of use through integrated transport systems that facilitate trip planning and navigation.

**5.1. Colocate multiple services and modes to increase options for caregivers:**

- Clear, close, and easy walk connections
- Short transfer time

5.2. Integrate information and wayfinding in the system and to connect to other modes:

- Maps: digital, static, route strips
- Station and stop identification: totems, signs
- Announcements on vehicle and at stations
- Wayfinding
- Real-time information
- Online tools, such as social media and SMS

5.3. Facilitate integrated trip planning through static, online, and real-time information:

- Online trip planning tools using GTFS (General Transit Feed Specification) data
- Maps of the integrated public transport system online, in stations, and on paper for riders to take home

Implementation: Processes and Policies**1. Participatory planning:**

Plan with the community, specifically incorporating the perspectives, needs, and interests of babies, toddlers, and their caregivers.



- Focus groups
- Design workshops
- Gender audits
- Neighborhood-based planners
- Citizen advisors

2. Data:

Collect qualitative and quantitative data for care trips and travel patterns.



- Surveys: census, passenger counts, transfer surveys
- Qualitative surveys
- Intersectional analysis

3. Capacity building:

Provide opportunities for decision makers, transport and city agencies, and operators to learn about the needs of young children and their caregivers.



- Training
- Study tours
- Walkshops
- Refresher courses

4. Test and revise:

Produce pilots and generate community input and buy-in around programming for babies and toddlers in order to scale up larger projects.



- Tactical urbanism
- Pop-ups
- Temporary street closures

5. Scale:

Implement sustainable urban development and mobility policies, plans, and programs that institutionalize the needs of caregivers, babies, and toddlers.



- Street design guidelines
- Land use policies
- Building codes
- Transport plans, policies, service standards
- Budgets and capital plans
- Cross-agency task forces

BIBLIOGRAPHY:

Berman, Marc G., John Jonides, & Stephen Kaplan. 2008. The cognitive benefits of interacting with nature. *Psychological Science*, 19(12), 1207–12.

Heckman Equation. n.d. Four Big Benefits of Investing in Early Childhood Development. Accessed November 1, 2021.

Malley, Christopher S., et al. 2017. Preterm birth associated with maternal fine particulate matter exposure: A global, regional and national assessment. *Environment International*, 101, 173–82.

UNICEF. n.d. Growing cities. Accessed July 28, 2020.

UNICEF. nd. Parenting tips for the first two years of life. Accessed October 28, 2021.

UNICEF. 2013. Why early childhood development? Accessed November 1, 2020.

UNICEF. Early Childhood Development: Building your baby's brain. Accessed July 13, 2021.

United Nations. 2019. Make cities and human settlements inclusive, safe, resilient and sustainable.

UNHCR (Office of the United Nations High Commissioner for Refugees). 2016. Frequently asked questions on climate change and disaster displacement.

UN Women. n.d. In focus: Climate action by, and for, women. Accessed November 1, 2020.

Urban95. 2019. An Urban95 starter kit: Ideas for action. Bernard Van Leer Foundation, The Hague.

US Council of Economic Advisers. 2015. The economics of early childhood investments.

WHO (World Health Organization). Number of deaths in children aged <5, by cause. The Global Health Observatory.

WHO (World Health Organization). 2004. Road safety-speed. Accessed November 1, 2020.

WHO (World Health Organization). 2020. Road traffic injuries.

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