# Vision Zero: A Health Equity Road Map for Getting to Zero in Every Community

By Manal Aboelata, Elva Yanez, and Rebekah Kharrazi

*With its audacious goal to eliminate traffic fatalities and severe injuries, Vision Zero represents the opportunity to rethink how we utilize data, invest resources, and operate today's transportation system to improve conditions so that all road users, including pedestrians and bicyclists, have the opportunity to travel safely. In the US context, "getting to zero" requires an explicit focus on health equity involving data collection, community engagement, and public investments in low-income communities, communities of color, and among road users most disproportionately involved in traffic fatalities and severe injuries.*

Motor vehicle safety measures implemented throughout the 20th century — like improved vehicle and roadway design, broader use of safety belts and car seats, and stronger drunk driving laws and enforcement — have contributed to substantial reductions in traffic-related death rates in the United States, even as annual vehicle miles traveled increased steadily during the same time period.[1] Despite this progress, traffic collisions remain a leading cause of death and disability in the US and are responsible for more deaths among children and young adults than any other cause.[2,3] Motor vehicle crashes resulted in more than 35,000 deaths — approximately 96 deaths per day — in 2014, and two million non-fatal injuries in 2013.[4,5] The US motor vehicle crash death rate of 10.3 deaths per 100,000 people far outstripped such deaths in peer nations in 2013.[6] Motor vehicle crashes are also extremely costly in the US with fatalities totaling $44 billion in medical and work loss costs in 2013 and injuries totaling $18 billion in lifetime medical costs and another $33 billion in lifetime work loss costs in 2012.[7,8]

Injuries are not accidents — they are predictable and preventable. As the 20th century experience demonstrates, employing comprehensive, integrated, and quality prevention strategies saves and improves lives and reduces healthcare, law enforcement, and other governmental and business costs to society. Today, nearly two decades into the 21st century, promising traffic safety policies, programs, and initiatives are emerging. These include active transportation investments, Complete Streets policies, Safe Routes to School programs, and — the particular focus of this brief — Vision Zero initiatives. Vision Zero is a growing movement in cities across the US and around the globe to eliminate all traffic-related deaths and severe injuries within a designated time period. Distinct in its acknowledgement that traffic-related deaths and severe injuries are preventable, and its focus on improving traffic safety through systems-level approaches, Vision Zero strives for better transportation systems and infrastructure for vehicle traffic as well as for people who walk, ride bicycles, and use other forms of transportation. Vision Zero is a bold vision that is not only possible, but necessary.

> "*Health Equity means that everyone has a fair & just opportunity to be healthy. This requires removing obstacles to health such as poverty, discrimination & their consequences —including powerlessness & lack of access to good jobs, education, housing, environments, & health care.*"
>
> - Paula Braveman
>
> Working definition presented at the American Public Health Association Annual Conference. November 2016

First implemented in Sweden in 1997, then successfully across Europe and other parts of the world, Vision Zero is now actively being implemented in over two dozen US cities from Anchorage, Alaska, to Fort Lauderdale, Florida.[9] Compared to other countries, there are major differences in travel behaviors,

modes of transportation used, and economic and racial demographics in the US. Current practices and historic legacies that are unique to the US and perpetuate bias and discrimination have further resulted in differential access to and investments in the transportation system.

Though translating Vision Zero from its birthplace in Europe to the US context presents challenges, it also creates opportunities. In an effort to bolster the success of Vision Zero in the US, this brief focuses on the opportunity for Vision Zero to address longstanding health inequities experienced by people of color and low-income communities by addressing the underlying policy decisions, allocations, enforcement, and design issues that impede our transportation system and produce inequities. Intentionally focusing on achieving health equity in traffic safety is essential to operating a high-quality transportation system and "getting to zero."

Like other leading causes of morbidity and mortality, traffic-related injuries and fatalities are not evenly distributed across the population. In locales across the country, people of color and low-income populations are over-represented in traffic-related injuries and fatalities. These preventable and reversible inequities in injuries are frequently rooted in differences in the transportation infrastructure, not solely attributable to driver behavior. Many low-income communities, especially communities of color, have not received the same level of policy attention, public and private investment, and other types of innovation in safe, equitable land uses that have benefitted higher income neighborhoods — and these decisions typically rest in the hands of municipalities.[10]

Further, low-income communities and communities of color are frequently starved for basic infrastructure like crosswalks, functioning street lights, and sidewalks, much less safety-promoting resources and infrastructure like effective traffic calming and safe walkability infrastructure. These same communities are typically overburdened by high-speed thoroughfares and concentrations of land uses, such as liquor stores or bars, that may be associated with unsafe road user behavior and increased incidences of injuries and fatalities.[11] These conditions are commonplace in low-income, Native American, Latino, and African American neighborhoods throughout the US, reflecting the systematic production of inequities through historical and current day policies, practices, and procedures.[12]

But just as traffic-related inequities have been produced, there are pathways to build, operate, and maintain a safer, more equitable transportation system. To this end, the following recommendations offer a starting point for practitioners to incorporate health equity considerations into planning and implementation of existing and future Vision Zero initiatives.

---

### Recommendations for Advancing Health Equity through Vision Zero

1. **Develop and implement strategies to address the conditions that create traffic-safety inequities *in the first place*.**

2. **Engage the diverse range of partners within and outside government and start with community members in defining solutions that will create safer traffic conditions.**

3. **Get and use data that gets at equity that will create safer traffic conditions.**

> **Recommendation 1:** Develop and implement strategies to address the conditions that create traffic-safety inequities *in the first place*.

Understanding the impact of historic and current policies and laws, practices, and procedures is a necessary first step to begin to address and reverse inequities in health and safety outcomes, particularly in communities that have been marginalized by virtue of race/ethnicity or income. To reduce injuries and fatalities in communities of greatest need, it is critical to identify and act upon the policies and practices of government, businesses, and institutions that create unsafe traffic conditions. Transportation planners, engineers, and boards of transportation, among others, can use their knowledge of historic and present-day decisions to implement specific strategies to rectify the conditions that produce inequities in transportation infrastructure (e.g., public and private investments, allocation decisions, construction, operations, and responsiveness to community concerns) that are associated with traffic fatalities and severe injuries. Proposed strategies include:

- **Pursue a set of strategies that address what is causing traffic crashes in the first place.** To fully address the factors that lead to differences in traffic-related injuries, it is critical to address not just individual-level factors — such as knowledge, attitudes, and behaviors of drivers, pedestrians, and bicyclists — but also policy, systems, and environmental factors like safe speeds, inadequate land-use planning, and persistent divestment in low-income communities and communities of color. Prevention Institute's Spectrum of Prevention provides a useful framework for developing comprehensive, interdisciplinary, and collaborative prevention strategies that facilitate norms change. Rather than just asking what can be done to address traffic collisions, the key question is what can be done to address the conditions that lead to traffic crashes, in the first place.

The **Spectrum of Prevention** is a framework that promotes a multifaceted range of activities for effective prevention, designed to help people move beyond education approaches alone to focus on the policies, systems, and environments that shape health and safety. The Spectrum has been used to develop comprehensive prevention strategies in traffic safety, injury prevention, and many other fields. See below for a detailed Spectrum example applied to car seat safety.

| Influencing Policy and Legislation |
| Changing Organizational Practices |
| Fostering Coalitions and Networks |
| Educating Providers |
| Promoting Community Education |
| Strengthening Individual Knowledge and Skills |

- **Address the underlying causes of disinvestment.** Work to undo the historic and current forces that have led and continue to lead to uneven investment across communities, with some communities benefitting from greater investment while others experience public and private

disinvestment. Consider how public and private investments in transportation infrastructure are dispersed between neighborhoods. For instance, jurisdictions that rely heavily on private investment for routine upgrades to transportation infrastructure (e.g. sidewalks, curb ramps, crosswalks, and traffic signals) will generate inequalities in resources, favoring communities with strong real estate markets and starving less advantaged communities of needed resources. Consider how prioritized allocations of public funding can address these gaps in private funding, and determine how to institutionalize and sustain ongoing investment in these areas.

- **Engage community members from the start.** Create forums that enable residents to identify the underlying structural and policy factors that they see as undermining transportation safety. Ask residents to identify what design decisions, enforcement practices, and neighborhood-level policies can be addressed to make their neighborhoods safer and improve local conditions for people who walk, ride bicycles, and use other forms of active transportation as well as for people who have unique mobility needs. Resident engagement strategies like community walk audits that document unsafe walking conditions and then ask who is responsible for fixing these conditions are just one example of engagement processes. If working directly with residents is not feasible, partner with organizations that engage directly with community members to secure resident perspectives.

**Enforcement** has been identified as an important strategy for redirecting unsafe behaviors on roads, trails, and sidewalks, by creating a "stick" that motivates people to obey traffic signals and signs, use protective gear like seat belts and helmets, and deter dangerous behaviors, such as driving while under the influence of alcohol or texting while driving. However, Vision Zero efforts must take great care in implementing strategies that rely on law enforcement, recognizing that police discrimination and disparities in enforcement practices — like disproportionate traffic stops and searches of people of color — are problems and relations with law enforcement are oftentimes perceived and experienced as negative. This may require training police officers and engaging residents to discuss how they would like to address these issues so that "getting to zero" builds community champions and ownership, rather than alienating residents in the process.

- **Assess the effectiveness of countermeasures, including their cultural relevancy.** Draw upon existing evaluations or develop new tools to evaluate injury prevention countermeasures for effectiveness in low-income communities, communities of color, and non-English speaking communities that can be adapted to diverse community contexts. Educational activities and materials should be tailored so that they are community relevant, culturally appropriate and linguistically accessible, and should be combined with other strategies. Seek to understand what countermeasures may need to be modified to work best in low-income communities and communities of color and always seek to identify what institutional practices (e.g. law enforcement bias/discrimination) may need to be addressed to increase Vision Zero effectiveness. Where possible, contract directly with local residents or community-based organizations.

- **Share and learn from others.** Engage with Vision Zero initiatives around the country to identify what other localities have done to meaningfully engage diverse populations and across a wide range of sectors in leadership and participation roles. This should complement the use of local knowledge from community members and other stakeholders and partners who can account for the unique circumstances and needs of the community.

- **Consider unintended consequences for equity.** As Vision Zero brings together multiple sectors to improve traffic safety, it's important to ensure that these efforts don't exacerbate other community concerns. Conduct deeper investigation, such as an Equity Impact Review, which seeks to understand the impacts of countermeasures, including unintended consequences that may exacerbate inequities in communities of color and low-income communities. For example, consider engaging the housing sector — including public housing agencies, affordable housing developers, and community-based advocates — to coordinate strategies so that all Vision Zero interventions proactively anticipate and mitigate the potential for displacement.

**Recommendation 2:** Engage the diverse range of partners within and outside government and start with community members in defining solutions that will create safer traffic conditions.

When Vision Zero initiatives successfully identify which areas of their municipalities are experiencing the highest rates of traffic-related injuries and deaths, they can learn a lot about the profile of the community. It is important for transportation departments to proactively seek out data and resident perspectives in immigrant and non-English speaking communities, low-income neighborhoods, and neighborhoods that are predominantly people of color, as the residents of these communities may be disinclined to reach out to government to communicate concerns about traffic safety, or they may reach out but not receive timely and complete responsiveness. Beyond demographics, factors like local investment, density of alcohol outlets, and community-relations with police can all become part of a process of understanding the decisions local government officials and businesses have or have not made that influence traffic safety conditions. Looking at decisions and practices across sectors represents a key opportunity for communities to identify what will lead to improvements in transportation, health, safety, and equity outcomes, particularly by addressing the root causes of poor outcomes, while at the same time producing co-benefits for a wide range of sectors. Proposed strategies include:

- **Implement a "Safety in All Policies"[i] approach.** Solving today's complex health and social issues effectively and equitably is beyond the purview of any one agency, organization, or discipline. A Safety in All Policies approach and mindset could serve to elevate traffic safety and more

---

[i] Prevention Institute's idea for *Safety in All Policies* (SiAP) was inspired by *Health in All Policies* (HiAP), a collaborative, multi-sector policymaking approach gaining national momentum. While SiAP was formulated with violence prevention in mind, it can be adapted for traffic safety as well. The terms HiAP and SiAP can be misleading as they can imply a focus on policy only and don't explicitly acknowledge the win-win nature of such an approach. In fact, considerations for health and safety can be embedded in policies as well as organizational practices and broader decision-making of multiple sectors. Further, these considerations can serve to improve outcomes for participating sectors. For example, safer street infrastructure can increase a community's walkability and create opportunities for improved physical activity.

effectively engage a diverse range of partners within and outside of government. Local law enforcement, city planning, the business sector, and regulatory agencies all have specific roles related to decision-making, resource allocations, and enforcement, among others, that are central to improving the conditions that lead to traffic safety inequities. Safety in All Policies is also about achieving benefits beyond safety, such improved efficiency, increased sales for local businesses, and enhanced community participation and engagement.

- **Involve the community throughout the process.** Build and sustain meaningful community engagement in all Vision Zero data collection, planning, implementation, and evaluation efforts. Prioritize engagement in communities of greatest need where there are concentrations of low-income households, people of color, non-English speaking residents, older adults, people with disabilities, and children. One model is to provide grants to well-respected community based organizations that have existing relationships with residents and other stakeholders to serve as organizing hubs for identifying and addressing the conditions that lead to traffic safety problems. Community residents and stakeholders, working with local transportation and health agencies, can analyze and understand where to focus action.

---

**Moving Beyond the E's.** Traffic safety initiatives commonly employ a framework of E's — frequently, **Engineering**, **Education**, **Enforcement**, and **Evaluation** and sometimes the addition of a fifth E such as **Encouragement**, **Emergency Medical Services**, or **Equity** — to promote a multifaceted approach for reducing traffic-related deaths and injuries. When leveraging the four/five E's framework, it is important to incorporate policy, systems, and environmental change approaches as these strategies have the greatest potential to improve health and safety. As part of a comprehensive prevention approach, it is also necessary to prioritize community residents and build their leadership and ownership of traffic safety and to anticipate and monitor unintended negative consequences that might arise as a result of various approaches.

---

- **Engage city and county departments.** Municipal agencies involved with Vision Zero efforts should engage a wide range of city and county departments, including public health, transportation, public works, parks and recreation, public safety, and others, along with local residents and community-based organizations, in identifying policies and practices, particularly those aimed at systems and population-level changes, that could improve conditions underlying traffic safety. Discuss leveraging of resources, such as data collection, research capacity, community engagement opportunities, and programming.

- **Build and strengthen partnerships.** Collaborate with existing coalitions, networks, task forces, and movements to share data, strategies, and lessons learned to increase the reach and effectiveness of collective Vision Zero efforts. Prevention Institute's Collaboration Multiplier tool provides a useful methodology for identifying and enlisting potential partners — including private and non-governmental actors — around shared goals.

**Recommendation 3:** Get and use data that gets at equity that will create safer traffic conditions.

Traffic safety has long relied on — and been subject to the limitations of — data collected by police officers. Measures of race/ethnicity, for instance, are frequently unreliable. To begin to identify the underlying policy decisions and institutional practices that lead to traffic collision inequities, Vision Zero will need to draw upon data that tells a more complex story about why disparities in traffic safety exist and point the way toward what can be done to improve these policy decisions, investments, and institutional practices. Vision Zero can be a catalyst in helping locales to set up the data framework and systems that will enable better data to be captured, link and integrate multiple sources, make data publically available, and conduct more informative analyses. What's key is to ensure that agencies as well as the residents and community stakeholders involved with Vision Zero initiatives can use these data to work toward traffic safety improvements that are purposeful and relevant and that data are employed to support better strategy and engagement. Proposed strategies include:

- **Improve data quality.** Data that focuses on disparities, makes explicit who experiences them, and helps to answer "why?" is essential to developing and implementing health equity initiatives. What are factors beyond driver behavior and road design that lead to collisions? When residents look at the data, what do they know and understand? Law enforcement data needs to become more complete, and Vision Zero should set models for the kind of local data that's needed (including allocations by neighborhood for traffic safety improvements, response times to community-identified traffic concerns, etc.) and improve data collection at the outset. This includes, but is not limited to, measures of race/ethnicity, language, and gender. Consider revising existing data collection forms to incorporate relevant demographic and environmental information, improving training for individuals collecting the data, and establishing more rigorous data collection standards. Go beyond individual-level data to include neighborhood contextual profiles and data mapping to help guide decision making.

- **Conduct informative data analyses.** To comprehensively address the differences we see in traffic safety collisions, in terms of incidence and severity, it is vital to develop a more complete picture of what's happening in neighborhoods and the municipalities that provide the context in which any given collision occurs. With an analysis of traffic safety patterns by race/ethnicity and income, situated in a neighborhood context, differences in traffic safety can be better understood, and more importantly, approaches can be better designed to address the unique challenges and opportunities that may exist when addressing traffic safety in any communities that have been marginalized or disenfranchised, whether that be by race, income, or any other social dimension. Subgroup analyses by race/ethnicity and income are also necessary to lay the foundation for public engagement, outreach, and development of targeted interventions.

- **Engage community-based organizations with ties to local residents in data collection and analysis.** Community members need to become the stewards of their own data and be engaged to help define the strategies that will work for their particular needs. To do this, community members must have access to the data in a form that is easily accessible and usable. In some cases, community members are fully engaged in undertaking research and generating data. For example, participatory action research initiatives that involve residents, community based

organizations, and academic researchers have been highly successful in other issue areas. Having a central and public hub, like a Vision Zero data dashboard, for all relevant data can further support access, accountability, and engagement.

- **Integrate data sources.** Data sources should be used that link key environmental variables, such as alcohol outlet density or street and highway classifications, to traffic collisions to determine whether there are relevant links between environmental factors and collisions. Collision data collected by law enforcement should be linked with health data from hospitals, emergency rooms, and trauma centers, and data-sharing agreements should also be established with non-health sectors, such as land use and planning, public works, public safety, transportation, housing, economic development, and parks and recreation. Once community profiles are developed to provide local context, the question that must be asked and answered is: why does this injury profile look the way it does and what can be done to address the physical, social, political, and structural conditions that lead to these patterns in the first place?

- **Conduct community needs assessments.** Community needs assessments should include multi-disciplinary data from a number of sources in addition to direct community input. Survey community residents — particularly older adults, people with physical disabilities, children/parents, and other people with unique mobility needs — to better understand the barriers they face in safely getting around.

- **Monitor and evaluate interventions.** Conduct ongoing analyses to assess whether interventions are working as intended and screen for unintended negative consequences. Evaluate the impact of interventions on different race/ethnicity, income, and age groups, and make necessary changes or adjustments to interventions if they are found to exacerbate or produce new inequities.

---

Vision Zero represents a bold vision with the potential to save lives, change norms, and shift the culture nationwide when it comes to how people view and experience traffic collisions. Vision Zero initiatives with a health equity lens firmly in place reset the current view of traffic-related injuries and fatalities as regrettable but to some extent inevitable by insisting that serious injuries can be prevented and that we should aspire to achieve zero traffic fatalities in all communities. Vision Zero helps us all to own the idea that even one traffic fatality is too many — one life lost means a family destroyed and a community deprived. Vision Zero is not just bold, it's essential.

*This brief was adapted from a health equity analysis of the [Vision Zero of Los Angeles Action Plan](#) conducted by Prevention Institute in 2016 and includes critical input provided by Leah Shahum (Founder and Director, Vision Zero Network), Eric Bruins (Principal, Bruins Policy Solutions), and Tamika Butler (Executive Director, Los Angeles County Bicycle Coalition).*

© January 2017

## About Prevention Institute

**Prevention Institute** (PI), founded in 1997, is a national non-profit center dedicated to improving community health and well-being by building momentum for effective primary prevention. Primary prevention is defined as taking action to build resiliency and to prevent problems before they occur. PI is committed to preventing injury and illness, to fostering health and social equity, and to building momentum for community prevention as an integral component of a quality health system. We do this by synthesizing research and practice; developing prevention tools and frameworks; designing and guiding interdisciplinary partnerships; and conducting training and strategic consultation with government, foundations, and community-based organizations nationwide and internationally. Our work is characterized by a strong commitment to community participation and promotion of equitable health and safety outcomes among all social and economic groups.

## Prevention Institute publications

- *Traffic Safety in Communities of Color* highlights major traffic safety needs within specific communities of color, and concludes that ongoing data collection and analysis are necessary to provide a more complete picture of the issue.

- *Safety in All Policies: Multi-Sector Actions for a Safer California* provides a framework and actionable recommendations to advance community safety and violence prevention in California through a multi-sector public health approach.

- *The Transportation Prescription: Bold New Ideas for Healthy, Equitable Transportation Reform in America*, co-authored by PolicyLink, analyzes the intersection of transportation, health, and policy.

- *Walk On: Strategies to Promote Walkable Communities* explores the nuts and bolts of planning and policies that help make communities more walkable and safer for pedestrians, including case studies of rural and urban communities that are making real strides to encourage walking.

- *Bridging the Gap: Bringing Together Intentional and Unintentional Injury Prevention Efforts to Improve Health and Well Being* describes how unintentional injury prevention and violence prevention practitioners can more effectively collaborate to promote safer environments and reduce the incidence of injuries.

- *The Spectrum of Prevention: Developing a Comprehensive Approach to Injury Prevention* applies PI's signature framework, The Spectrum of Prevention, to the development of comprehensive, interdisciplinary, collaborative injury prevention strategies.

- *Collaboration Multiplier: Enhancing the Effectiveness of Multi-Field Collaboration* provides an overview of Collaboration Multiplier, an interactive tool for strengthening collaborative efforts across diverse fields.

## Spectrum of Prevention example

**A Comprehensive Approach to Promoting Car Seat Usage and Preventing Child Passenger Injuries**
Cities, counties, health departments, academic institutions, community-based and non-governmental agencies, and foundations use the Spectrum of Prevention to guide initiatives and incorporate policy proposals to address significant health and social issues. The following example demonstrates how this comprehensive approach helped shift social norms and practices related to preventing motor vehicle passenger injuries among children.

| LEVEL OF SPECTRUM | ACTION STEPS TOWARD CHANGE |
|---|---|
| **6. INFLUENCING POLICY AND LEGISLATION**<br>*Influencing outcomes by developing strategies to change laws and policies* | • Local ordinances mandate that all children be properly buckled in age and size-appropriate child safety seats.<br>• State laws require the use of child passenger safety seats.<br>• Legislation designates that revenue from tickets for lack of or improper use of car seats be spent on car seat education and on providing free car seats to families that can't afford them. |
| **5. CHANGING ORGANIZATIONAL PRACTICES**<br>*Adopting standards and shaping norms to improve health and safety* | • In all hospitals, discharge staff and neonatal nurses escort new parents to the car in which a baby will be transported from the hospital to ensure proper installation and use of infant car seats.<br>• Fire departments conduct periodic child safety seat trainings and giveaways.<br>• Police officers enforce child passenger laws. |
| **4. FOSTERING COALITIONS AND NETWORKS**<br>*Bringing together groups and individuals for broader goals and greater impact* | • Public health, law enforcement, fire department, community-based organizations, health-care providers, and residents work together to identify strategies to support car seat usage through policy and program development. |
| **3. EDUCATING PROVIDERS**<br>*Informing providers, who will then transmit skills and knowledge to others* | • Public health community liaisons provide training to fire, police, and hospital staff and community leaders on importance of the car seat laws and proper installation. |
| **2. PROMOTING COMMUNITY EDUCATION**<br>*Reaching groups of people with information and resources to promote health and safety* | • Local fire departments participate in car seat giveaways and engage large groups of residents in events where car seats will be distributed.<br>• Local media promotes car seat safety messages, with a special focus on ensuring that the messages are linguistically and culturally relevant to all members of the community. |
| **1. STRENGTHENING INDIVIDUAL KNOWLEDGE AND SKILLS**<br>*Enhancing an individual's capacity to prevent injury or illness and promote health and safety* | • Police, fire, and hospital staff provide information and guidance on proper installation and use of car seats.<br>• Store owners that sell car seats provide brochures on the importance of child safety and installation manuals. |

## References

[1] Jones B, Dellinger A, Wallace D (1999). Achievements in Public Health, 1900–1999. Motor Vehicle Safety; A 20th Century Public Health Achievement. Morbidity and Mortality Weekly Report 48(18):369-74.

[2] Murray CJ, Abraham J, Ali MK, et al (2013). The State of US Health, 1990-2010: Burden of Diseases, Injuries, and Risk Factors. JAMA 310(6):591-606.

[3] United States Centers for Disease Control and Prevention. Ten Leading Causes of Death and Injury. Assessed: September 20, 2016. Available at: http://www.cdc.gov/injury/wisqars/leadingcauses.html

[4] National Center for Vital Statistics (2016). Deaths: Final Data for 2014. National Vital Statistics Reports 65(4).

[5] United States Centers for Disease Control and Prevention. Vital Signs: Motor Vehicle Crash Deaths. Assessed September 19, 2016. Available at: https://www.cdc.gov/vitalsigns/motor-vehicle-safety/index.html

[6] Sauber-Schatz EK, Ederer DJ, Dellinger AM, Baldwin GT (2016). Vital Signs: Motor Vehicle Injury Prevention— United States and 19 Comparison Countries. Morbidity and Mortality Weekly Report 65(26).

[7] United States Centers for Disease Control and Prevention. State-Specific Costs of Motor Vehicle Crash Deaths. Assessed: September 20, 2016. Available at: https://www.cdc.gov/motorvehiclesafety/statecosts/index.html

[8] Bergen G, Peterson C, Ederer D, et al (2014). Vital Signs: Health Burden and Medical Costs of Nonfatal Injuries to Motor Vehicle Occupants—United States, 2012. Morbidity and Mortality Weekly Report 63(40):894-900.

[9] Vision Zero Cities. Vision Zero Network. Assessed: October 24, 2016. Available at: http://visionzeronetwork.org/resources/vision-zero-cities/

[10] Healthy Equitable Land Use Network (2016). Strategic Opportunities to Create a Healthy, Equitable Land Use System in Los Angeles. Prevention Institute.

[11] Zimmerman Sara, Lieberman M, Kramer K, Sadler B (2015). At the intersection of active transportation and equity: joining forces to make communities healthier and fairer. Safe Routes to School National Partnership.

[12] Prevention Institute (2016). Countering the Production of Health Inequities: A Framework of Emerging Systems to Achieve an Equitable Culture of Health. Extended Summary.