Case #3: Policy Alternatives and Sweden’s Vision Zero

Formulating Policy: Strategies and Systems of Policymaking in the 21st Century
December 10, 2018
ROAD TRAFFIC INJURIES: THE FACTS

1.35 MILLION ROAD TRAFFIC DEATHS EVERY YEAR

LOW-INCOME COUNTRIES
1% of the world's 13% of all deaths

HIGH-INCOME COUNTRIES
40% of the world's 7% of all deaths

54% of deaths are pedestrians, cyclists, and motorcyclists

1ST CAUSE OF DEATH AMONG CHILDREN AGED 5-14 AND AMONG YOUNG ADULTS AGED 15-29

EVERY 24 SECONDS SOMEONE DIES ON THE ROAD

SOURCE: WHO Global status report on road safety 2018

GLOBAL STATUS REPORT ON ROAD SAFETY 2018
Today

1. Ischemic heart disease
2. Cerebrovascular disease
3. Lower respiratory infections
4. Chronic obstructive pulmonary disease
5. Diarrhoea obal diseases
6. HIV/AIDS
7. Tuberculosis
8. Trachea, bronchus, lung cancer
9. **Road traffic injuries**
10. Prematurity and low birth weight

Source: WHO 2009
2030

1. Ischemic heart disease
2. Cerebrovascular disease
3. Chronic obstructive pulmonary disease
4. Lower respiratory infections
5. Road traffic injuries
6. Trachea, bronchus, lung cancer
7. Diabetes mellitus
8. Hypertensive heart disease
9. Stomach cancer
10. HIV/AIDS

Source: WHO 2009
# Road traffic deaths per 100 000 (2008)

<table>
<thead>
<tr>
<th>Region</th>
<th>Death Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>4.3</td>
</tr>
<tr>
<td>Nordic countries</td>
<td>5.5</td>
</tr>
<tr>
<td>Western Europe</td>
<td>5–6</td>
</tr>
<tr>
<td>Southern Europe</td>
<td>8–10</td>
</tr>
<tr>
<td>North America</td>
<td>10–12</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>15–20</td>
</tr>
<tr>
<td>Baltic states</td>
<td>20–25</td>
</tr>
</tbody>
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*Swedish Road Administration*
Considering Context: The Role of Design in Swedish Society

- Environmental Design and Safety 1950s
  - Focus on child injury prevention
  - Road traffic was one component
    - Separate children from traffic
  - 1,000,000 Housing Program
- Observations
  - High value on children
  - Acceptance of government role in public safety
  - Long term investment
Vision Zero: From Concept to Practice

- Guiding Principle: No loss of life is Acceptable
- Freedom to Move
  - Mobility is crucial for all parts of society, but more traffic means more fatalities and injuries on the road.
- The Human Factor
  - Humans are not made to travel at high speed. We make mistakes. Thus an effective road safety system must always take human fallibility into account.
- The Vision Zero Initiative
  - Transport systems traditionally place responsibility for safety on road users. The Vision Zero initiative puts this responsibility on system design.
Vision Zero: From Practice to Law

- Program initiated within government
- Legislation proposed by government
- Passed into law by Parliament
- Reliance on participation; government as a facilitator
Traditional thinking → Vision Zero

- Focus on accidents
- Perfect human behavior
- Individual responsibility
- Industry must be forced
- Saving lives is expensive

Focus on fatalities and serious injuries
Integrate the failing human in design
Shared responsibility between system and design
Industry can be stimulated
saving lives is cheap
Vision Zero Ethical Platform

System Designers
Responsible for safety level in entire system

If road users fail to comply
System designers take new steps to

Road Users
Responsible for following rules
What Vision Zero Looks Like

• Preventable analysis of road deaths: Where did the system fail?

• Reduced speed where pedestrians are present
  – Lower speed limits
  – Designing slowness into the system
  – Response
What Vision Zero Looks Like

• Accounting for human mistakes through design
  – Separation of road users
  – Traffic circles over four way intersections

• Problem definition
  – Severe injuries and deaths; NOT crashes
Holistic approach.
Reactions to Vision Zero

- Defining the problem
  - accident prevention vs. injury prevention
- Responsibility for the solution
- Framing the solution in the context of culture
  - community vs. individual orientation
- Leadership agency within government
- Role of government in realizing change
Vision Zero in the United States

• Replications
  – Include: Minnesota, Utah, Washington
  – Include: San Francisco, Portland, New York City, Chicago, Montgomery County, MD, Baltimore City…
NYC Vision Zero Statement of Principles

- **Recognize the Vast Scale of Traffic Fatalities and Serious Injuries**
  - Recognize the power of crash survivors and the families of people killed and seriously injured in traffic, and the widespread scale of traffic violence.

- **Focus on Messaging to Promote a Culture of Traffic Safety**
  - Communicate with singular focus on the behaviors that kill and injure the most people

- **Ensure Accountability**
  - Ensure the justice system holds individuals accountable for killing and injuring others in traffic.

- **Institutionalize Collaboration**
  - Institutionalize collaboration across various levels of government and between government officials and the public. Incorporate communities into traffic safety decision-making.

- **Protect the Most Vulnerable**
  - Prioritize the most vulnerable street users with the goal of creating a culture where everyone knows to think twice and exercise due care

- **Employ Data-Driven Enforcement**
  - Employ data-driven and automated enforcement at every opportunity.

- **Design Forgiving Streets**
  - Design streets in such a way that mistakes made by street users are less likely to result in serious injuries or fatalities.

- **Fund Safety**
  - Prioritize safety in funding decisions.

- **Track Progress**
  - Create time-bound goals to track progress toward Vision Zero and regularly re-evaluate strategy.

- **Empower Professional Drivers**
  - Empower professional drivers to lead by example and imbue them with the understanding that their livelihood depends on safe driving.
New York City: Vision Zero

5. Project Examples

7th Avenue & 23rd Street, 2011

- Curbside Left Turn Bay
- Pedestrian Island
- Pedestrian Split Phase

Left turn bay and channelization created space for painted curb extension to shorten crossing distance across 7th Avenue

Added pedestrian split phase to eliminate vehicle and pedestrian conflict for left turning vehicles (assuming compliance)

Installed curb side left turn bay to better organize traffic and create more visibility of pedestrians for turning motorists

Appropriate Design for: Major urban one-way arterials with high pedestrian volumes and low left turning vehicles

nyc.gov/visionzero
Baltimore: Toward Zero
WHAT IS A COMPLETE STREET?

ACTIVE SIDEWALKS
DEDICATED BIKE LANES
ACTIVE ROADWAY
SAFE CROSSWALKS
PLANTING STRIP
GREEN SPACES