Pedestrian, Bicyclist & Micromobility: Current Research & Findings
Moment of silence 💔

Since launching Vision Zero in 2015, over 1,400 people have been seriously injured and 203 people have died on Seattle streets.

Please take a moment to center on these lives lost and forever changed.

Together, let us hold space for them and acknowledge our role as those who hold the most power in preventing harm.
Historic traffic fatalities on Seattle streets

2011 inflection
Traffic fatalities on Seattle streets
Why are traffic fatalities going up?

This system is what we have been designing for 80 years

There is no great mystery
  • Speed, larger vehicles, lack of design for people vs cars
  • COVID-19 only further exposed flaws in the system

What we do works, we just aren’t able to build fast enough
How are we pivoting our approach

Out with the 3E’s
- Engineering, Education, Enforcement
- Individual responsibility for safety
- Leads to victim blaming

In with Safe Systems
- Centers on us as human beings instead of bad actors deserving of harm
- Responsibility placed on system and built environment

Move from reactive to proactive
Let’s talk about traffic enforcement

• People demand enforcement because they want safer streets.
• Enforcement is based on deterrence theory, which works when the punishment is severe and certain enough. Those 2 conditions are almost never met.
• What is the endgame?
Let’s talk auto-enforcement

• Automated enforcement is not the savior/golden goose
  • IS effective and REDUCES collisions but regressive fee/fine structure hurts our most vulnerable populations

• Seattle stats
  • White/wealthy neighborhoods see the highest rates of infractions per camera
  • Poorer communities and communities of color have the most cameras
  • 32% of tickets go unpaid ON AVERAGE and go to collections
Culture shift

Pivot education to those with the most power:
• Educate staff/each other
• Educate policy makers
• Educate the media

Educate about design features that work – not just how to use it, but what it is and why it’s effective.

I’m going to be frank and say that most public education campaigns are **wasteful, dangerous, and inequitable**.

Senior Research Associate
UNC Highway Safety Research Center
Enough with the E’s

Education and enforcement have been burned into our brains as defacto solutions that rely on punishing/changing bad actor behavior vs changing the system.

We need to change our thinking about how humans are using the environments they’ve been given.
Safe system approach

• Death and serious injuries are unacceptable
• Humans are fallible
• Humans are vulnerable
• Safety is proactive
• Redundancy is critical
Humans are vulnerable

Reviewed citywide serious injuries and fatalities for people walking and rolling

Death/serious injuries are unacceptable

Lower speed limits target 70%
Leading ped intervals target 17%
Redundancy is crucial

- Lower speed limits
- ‘First’ step of system redundancy
- Used target speeds based on street context
- Worked with Seattle police to reduce in-person speed enforcement
Safety is proactive

Reduced speed limits on 70% of arterials in one year
Safety is proactive

Pedestrian-First Intersections (LPI's)

- Total LPIs
- LPI candidate signals

5% to 50% coverage in 4 years

Reactive & targeted
Culture shift
Proactive & systemic
Process and results

**Lower speed limits**
- *Slowing drivers by 2 mph reduced injuries by 20%*
- *40mph+ speeding down by 50% (25mph streets)*

**Leading pedestrian intervals**
- *35% less serious injury and fatal pedestrian collisions*
- *Longer all-red led to 20% less angle collisions (t-bone)*
Proactive vs reactive systems

Safe system (proactive)
• Efficient and cheaper
  • Staff can focus on more safety projects per year
• Targets risk factors before they materialize into crashes
• Encourages empathy and shifts in built systems

Non-safe system (reactive)
• Slow and expensive
  • Greater resource needs for staffing, data collection, and analysis
• Requires death and suffering for action
• Places more blame on victims of traffic violence
Other proven safety treatments: Road diets

Rainier Ave S (Columbia City and Hillman City)

- Injury collisions **down 30%**
- Collisions with people walking and biking **down 40%**
- Top-end speeding (40+ mph) **down 75%**
What else is on the horizon

No Turn on Red signage
New Seattle city policy will install signs at all traffic signals

In 1970’s, USA allows turns on red = 60%-100% increase in ped collisions

2022 ITE study shows 92% reduction in pedestrian-vehicle conflicts when No Turn on Red is implemented

Institute of Transportation Engineers – Analysis of Expanded No Turn on Red Applications: May 2022 (ygscllicbook.com)
What else is on the horizon

Daylighting
Install no parking signs within 20-30’ of crosswalks (marked and unmarked)

Reduces pedestrian collisions by 30%

Working on Seattle policy/standard practice to implement citywide
Resources

Proven safety treatments
• FHWA Proven safety countermeasures
• FHWA Guide for Uncontrolled Crossings
• Crash Modification Factors Clearinghouse

Upcoming grant funding
• Safe streets and roads for all (SS4A)
  • Annual $1B awarded for safety projects or safety action plans
• Highway Safety Improvement fund (HSIP)
Questions?

bradley.topol@seattle.gov