



SCHOOL OF PUBLIC HEALTH
UNIVERSITY of WASHINGTON



Washington State Department of
Health

AUTONOMOUS VEHICLE – HEALTH AND EQUITY SUBCOMMITTEE

PRESENTED TO
WASHINGTON STATE TRANSPORTATION COMMISSION
OLYMPIA WA
OCTOBER 16, 2019

Dr. Andrew Dannenberg, UW School of Public Health

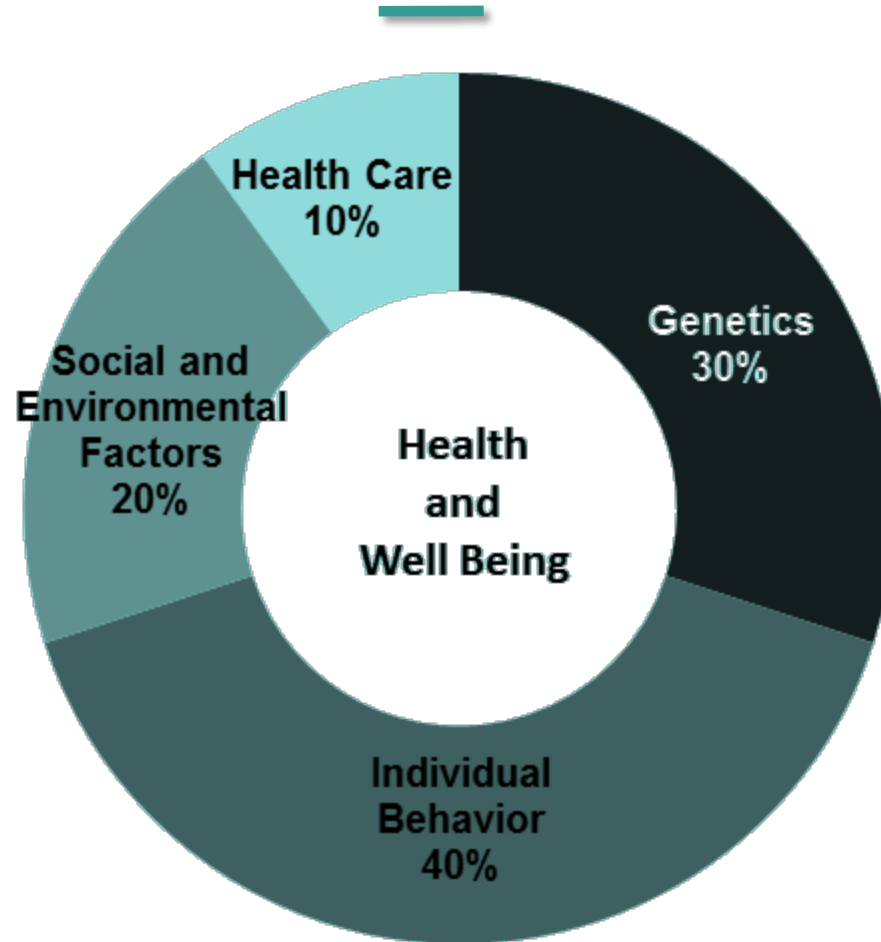
Health & Equity Subcommittee Update

Goal: Ensure the health benefits of automated mobility are equitably distributed and that negative impacts are not disproportionately borne by traditionally marginalized communities.

Established by WSTC on **July 2019**

1st Meeting November 19th, 2019 @ City of Seattle

Social Determinants of Health



SOURCE: Schroeder, SA. (2007). We Can Do Better — Improving the Health of the American People. *NEJM*. 357:1221-8.

Some Key Topics to Address

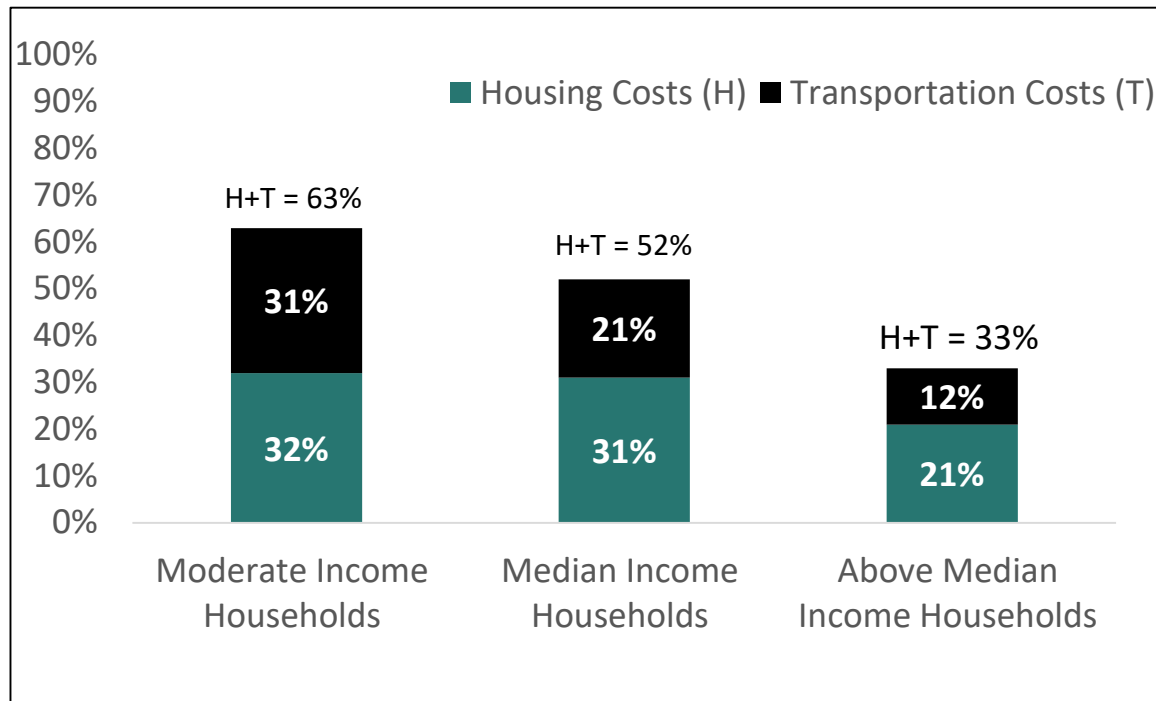
AV Health & Equity Impacts to:

- Access to transportation for all income levels
- Costs of AV transportation
- Distribution of AV services
- Accessibility and mobility for vulnerable populations
communities of color, people with disabilities, the young and the aging,
rural populations, and other historically marginalized populations
- Job losses from automation
- Exposure to traffic and related impacts

How will AVs impact transportation costs?

- Washington residents spend **52% of their monthly income** on housing and transportation on average.

Note: HUD established **45% of monthly income** as baseline for housing & transportation costs.

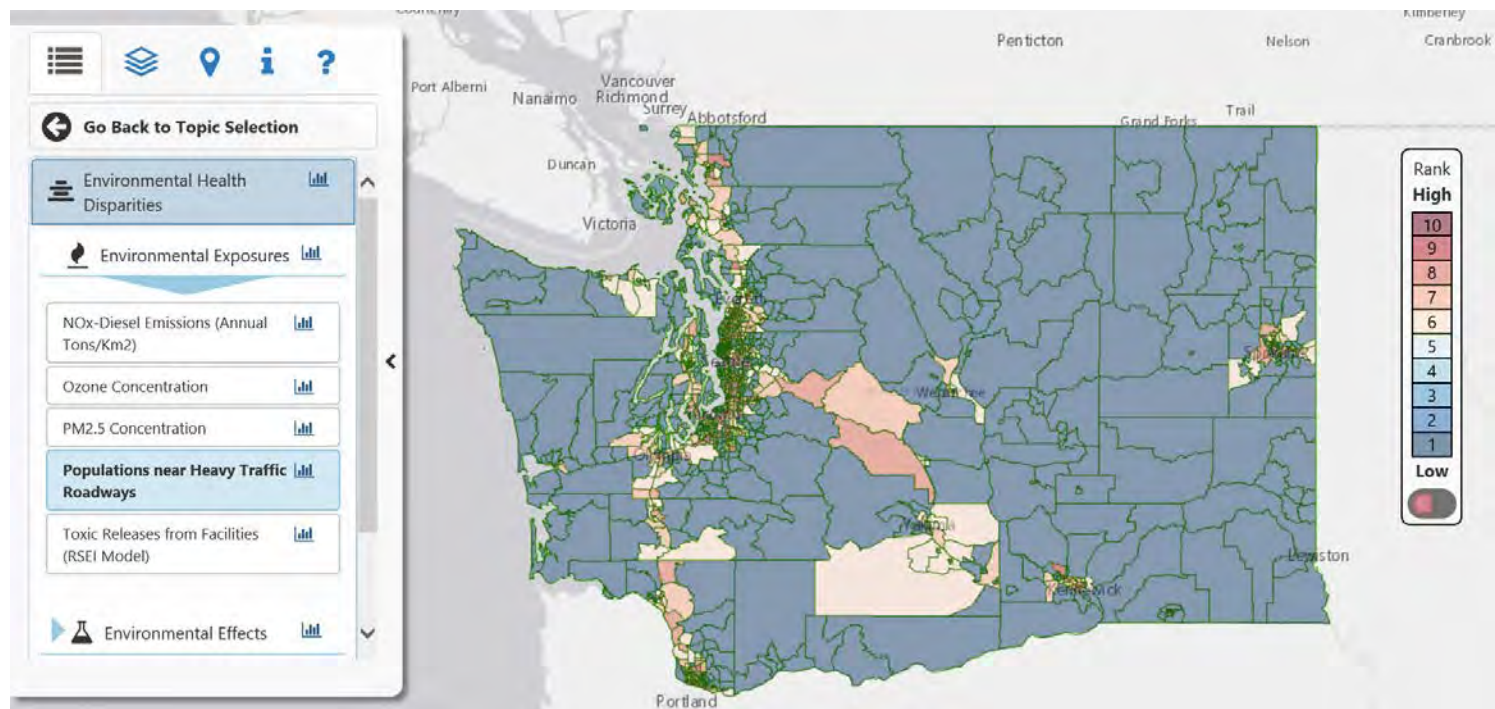


Source: Washington Tracking Network, Washington State DOH

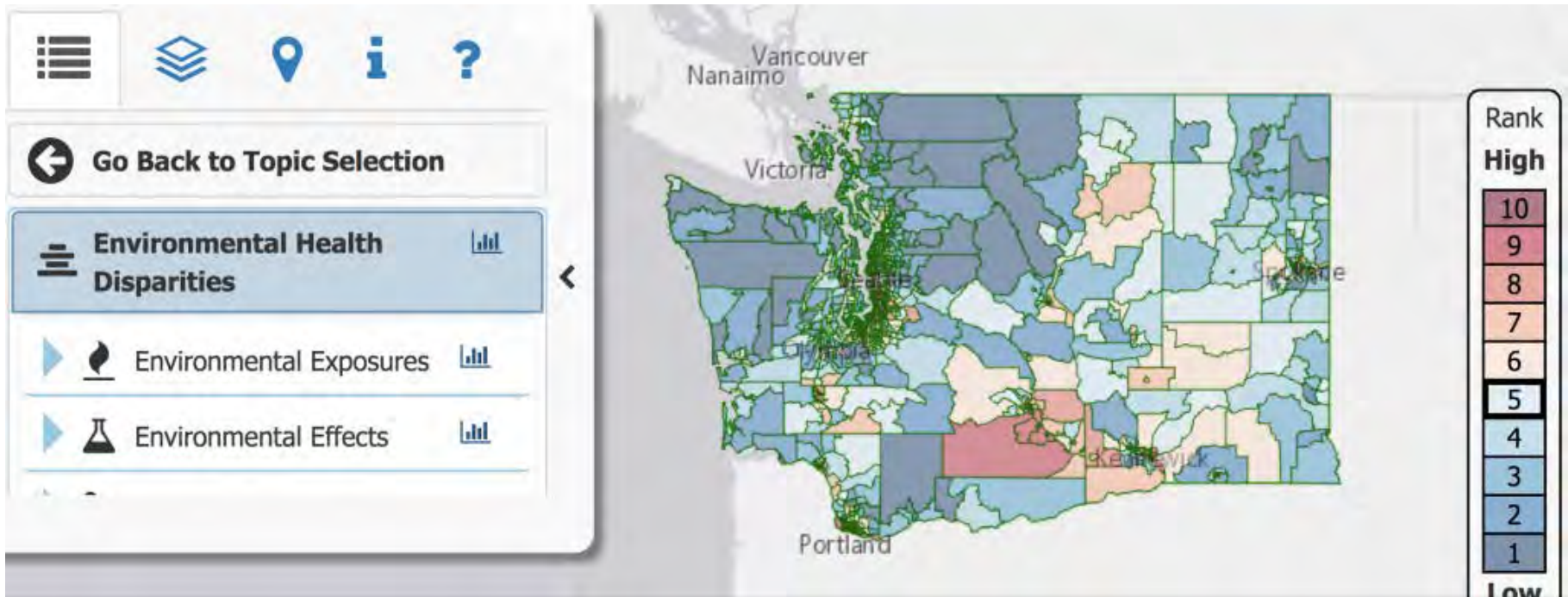
How will AVs impact air pollution exposures?

● High poverty neighborhoods:

- more likely to be located near major roads;
- higher rates of asthma, cardiovascular disease;
- higher pre-term and low-birthweight infants;
- more childhood leukemia;
- more premature death.



How will AVs impact existing health disparities?



www.doh.wa.gov/ibl

Subcommittee Recommendation – Assessment of Health Impacts

- Similar Recommendation in WSTC 2018 Report to the Legislature
- Consistent with *Washington’s Transportation Plan 2035*:
“Develop a Transportation Equity Analysis toolkit for use in evaluating the benefits and impacts of transportation policies and investments on historically marginalized populations in Washington.”
- Consistent with the Clean Energy Transformation Act
- Consistent with Washington’s public health goals

Some Questions to be Addressed:

- Would AV be more willing to go into some areas at night than the current taxi system?
- What health & equity issues are communities experiencing now, and how might AV improve that situation, or make it worse?
- How might testing AV technology on public roads disproportionately impact disadvantaged or vulnerable populations?

Some Questions to be Addressed (Continued):

- If less land is used for parking, what would happen to that land?
 - Would communities create more park land?
- Will more AV transportation mean less walking, and could that increase obesity?
 - Will AVs lead to less use of public transit?
- How might AVs impact bicyclists and pedestrians?
- How might AVs impact access to health care?

Questions?

Andrew L. Dannenberg, MD, MPH

Affiliate Professor
Dept. of Environmental and
Occupational Health Sciences, School of Public Health
and
Dept. of Urban Design and Planning,
College of Built Environments
University of Washington
adannen@uw.edu or adannenberg2@gmail.com
404-272-3978 | Book: <http://www.makinghealthyplaces.com>

Rad Cunningham

Senior Epidemiologist
Built Environment Section
Environmental Public Health
Washington State Department of Health
rad.cunningham@doh.wa.gov
360-236-3359 |



Washington State Department of Health is committed to providing customers with forms and publications in appropriate alternate formats. Requests can be made by calling 800-525-0127 or by email at civil.rights@doh.wa.gov. TTY users dial 711.