

SE McLoughlin Blvd Road Safety Audit HIA



A **road safety audit (RSA)** is a commonly used tool for transportation planners and engineers working to identify and reduce crash risk all users in a defined section of a transportation system.

Health impact assessment (HIA) is a tool to help decision-makers understand how their decisions might impact health.

Clackamas County Public Health, Clackamas Safety Communities, and the Clackamas County Department of Transportation and Development conducted a health impact assessment alongside an RSA on a .5 mile section of SE McLoughlin Boulevard/OR 99E.

The RSA was chosen as the focus for an HIA because the RSA provided Transportation and Public Health staff with an opportunity to maximize the health benefits of RSA strategies implemented to improve traffic safety, and to build off of Clackamas County's recently completed Transportation System Plan Update, which included health improvement goals. The HIA is also intended to support Clackamas County's "Drive to Zero" campaign, which aims to eliminate traffic crashes by promoting a culture of health throughout the county as part of the adopted Clackamas County Transportation Safety Action Plan.

HIA scope

The intention of the HIA was to characterize the relative community health impacts of each of the 42 proposed solutions from the road safety audit for the following health determinants:

- Opportunities for physical activity
- Exposure to air and noise pollutions
- Access to health-supportive resources

The HIA study area was defined as the three Census tracts that encompassed the Road Safety Audit (RSA) study area, forming a rough ½ mile buffer around the section of McLoughlin Blvd examined in the RSA. The HIA study area has a slightly higher percentage of vulnerable populations than the rest of Clackamas County, with lower-income households and a higher percentage of populations of color. Vulnerable populations are those at higher risk for poor health outcomes, and carry a disproportionate burden of disease. Low-income families, persons living with mental health challenges, older adults, and people of color are more likely to have less economic, education, and housing opportunities. They also have poorer access to health care, healthy food and affordable, safety transportation. As it relates to traffic safety, vulnerable populations such as low income communities, pedestrians, and children bear the highest burden of injuries and fatalities. Vulnerable populations are also more susceptible to the health risks associated with toxic air pollution from cars, trucks and other engines, especially in high traffic areas. Not surprisingly, the study area population has higher-than-county-average rates of four key transportation-related health outcomes: asthma, diabetes, heart disease, and obesity.

Table ES2: HIA raw and average scores for each health determinant

Scoring: possible scores for each impact area ("Access to the Trolley Trail", "Walking, biking, or transit use," etc) ranged from -2 (relatively strong negative impact) to +2 (relatively strong positive impact). The sub-total scores are the sum of scores for each health determinant and indicate the relative impacts of each proposed solution on the three health determinants. The "HIA Score" is the sum of the sub-totals and provides an indication of the relative overall health impacts of each of the potential solutions. The "RSA Risk Score" was provided by the RSA and is on a scale of 1-3, and indicates the relative likelihood and severity of the crash risk posed by the conditions that the proposed solution is meant to address.

Potential Solutions proposed by the RSA	HIA Score	RSA Risk score	PHYSICAL ACTIVITY			EXPOSURE TO AIR AND NOISE POLLUTION	ACCESS TO RESOURCES		SUB-TOTALS (sum of scores for each health determinant—highest scores are highlighted)		
			Access to the Trolley Trail	Walking, biking, or transit use	Access to schools and parks	Walking/biking along parallel streets/paths	Access to schools	Access to employment	Physical Activity	Exposure to Air and Noise Pollution	Access to resources
HIGH IMPACT											
Evaluate constructing sidewalks at key locations	12	2	2	2	2	2	2	2	6.0	2.0	4.0
Consider installing new street lighting poles for improved lighting uniformity and to increase pedestrian visibility.	12	2	2	2	2	2	2	2	6.0	2.0	4.0
Consider providing additional enhancements to increase visibility and driver awareness (e.g. warning signs, crosswalk markings, reflectors, advanced stop bars, rectangular rapid flashing beacons, etc.)	12	2	2	2	2	2	2	2	6.0	2.0	4.0
Evaluate adding or improving street lighting to remove contrast with private illuminated signs and lights.	9.5	2	2	2	0.5	2	1	2	4.5	2.0	3.0
Consider installation of a bicycle only signal with an exclusive bicycle phase and diagonal crossing. This treatment would create a designated connection with an exclusive bicycle phase	9.5	2	2	1.5	1.5	2	1.5	1	5.0	2.0	2.5
Evaluate installing sidewalk at existing gap locations. On the east side of SE McLoughlin Boulevard, sidewalk should be constructed from just south of SE Boardman Avenue 500 feet south to where the sidewalk begins again.	9.5	3	2	2	2	0.5	1	2	6.0	0.5	3.0

The HIA team used public health and planning evidence, and team member expertise to rate each RSA-proposed action for their impact on physical activity, exposure, and access to resources.

Findings

- Compared with Clackamas County as a whole, the RSA study area has relatively high rates of four key transportation-related health outcomes: obesity, asthma, diabetes, and heart disease.
- In addition to improved crash safety, all but five of the 42 solutions are likely to have a positive impact on health outcomes related to physical activity, exposure to air and noise pollution, and access to jobs and employment. Key health outcomes related to these health determinants include obesity, diabetes, heart disease, asthma, and stress.
- Of the 42 RSA proposed solutions, only one solution received a negative score because of potential safety risks that it would create for pedestrians trying to cross McLoughlin:
 - “Increase median width to provide sufficient space for two-stage crossings.”
- Physical activity is the primary health determinant impacted by most interventions, followed by access to resources.
- When comparing the HIA scores to the RSA qualitative risk scores:
 - There appears to be general alignment with the HIAs “low impact” solutions and the RSA’s Category 1 solutions.
- The “high impact” solutions generally appear to be relatively large pedestrian infrastructure projects that both improve pedestrian mobility and encourage changes in driver behavior due to increased visibility and awareness.

The Oregon Public Health Division’s HIA Program provided funding and technical support to Clackamas County and their partners for this HIA. More information is available at www.healthoregon.org/hia