Economic Framework: Park, Trail, and Greenway Infrastructure Interventions [1]

Park, trail, and greenway infrastructure interventions to increase physical activity include infrastructure (creation of new spaces or enhancements to existing spaces) with or without additional interventions, such as increased programming, access, promotion, and community engagement. The analytic framework postulates these interventions will increase community use of the infrastructure for physical activity, active transport, relaxation, and social interaction. The framework then proposes that these uses of the infrastructure would make the population more physically active, improve their mental health and wellbeing, improve their quality of life, and improve environmental outcomes, thus reducing morbidity and mortality.

The economic review identified the capital cost and maintenance cost to be drivers of intervention cost. The cost of additional interventions for programming, access, promotion, and engagement would also be a driver of intervention cost, when implemented.

The economic review postulates economic benefits derive from reduced healthcare costs due to improved physical and mental health, from the value of the infrastructure to users for recreation and relaxation, environmental improvements in air and water quality, and climate adaptability or biodiversity. The health-related benefits, the use value of the infrastructure, and the environmental effects are considered drivers of benefit. The framework also suggests that reduced morbidity and mortality due to improved physical and mental health would increase both quantity and quality of life years lived and avert disability adjusted life years for the community's population.

The framework conceptualizes summary economic outcomes as cost-effectiveness and cost-benefit. Cost-effectiveness is net cost per additional quality-adjusted life year saved or disability-adjusted life year averted. Cost-benefit is the ratio of averted healthcare cost and increased productivity to the intervention cost. It is possible that the infrastructure improvements can lead to displacement of current residents, and the framework includes this possibility and associated costs as a potential economic harm.

[1] Adapted economic content from Hunter RF, et al. Social return on investment analysis of an urban greenway. *Cities & Health* 2020: 1-18.