Moving Active Transportation to Higher Ground: Opportunities for Accelerating the Assessment of Health Impacts
April 13-14, 2015; Keck Center; Washington, DC

Sponsored by

Pedestrians Committee (ANF10)
Bicycle Transportation Committee (ANF20)
Health and Transportation Joint Subcommittee
Bicycle and Pedestrian Data Joint Subcommittee

Co-sponsored by
There is growing recognition in the transportation, planning, and public health fields that transportation systems and policies designed to increase bicycling and walking may enable more physical activity and help improve personal and community health. While the relationships between land-use patterns, transportation options, and public health seem intuitive, they remain difficult to study, quantify, and understand. If health outcomes are to be more routinely integrated into planning and transportation investment decision-making, these relationships will need to be robustly demonstrated, documented and communicated. There remain significant opportunities for research to contribute to this area.

This conference brings together experts and constituents from transportation, urban planning, public health, health care, and health economics to explore the states of the art and practice on quantifying the public health outcomes of active transportation.

Focus areas of the conference include:

- Scientific evidence on relationships between active transportation and health.
- Strategies for data collection and methods of data analysis and modeling that contribute to the quantification of impacts on personal, household, and community health as they relate to various aspects of active travel, such as usage, exposure to risks, or quality of pedestrian and bicycle facilities.
- Innovative tools and approaches to assess the impacts of active transportation (e.g. health impact assessments of transportation projects or local, regional, and state planning scenarios), as well as tools to better forecast the effects of project or plan alternatives on active transportation.

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**Conference Planning Committee**

**Ralph Buehler (Chair),** TRB Committee on Bicycle Transportation and Virginia Tech  
**David Bassett,** University of Tennessee-Knoxville  
**Paula Burkert,** American College of Sports Medicine  
**Sean Co,** Metropolitan Transportation Commission  
**Jennifer Dill,** Portland State University  
**Thomas Götschi,** University of Zurich  
**Janet Rankin,** American College of Sports Medicine and Virginia Tech  
**Eloisa Raynault,** Planning Communities, LLC  
**Robert Schneider,** University of Wisconsin-Milwaukee  
**Elizabeth Stolz,** Ready4Wellness, LLC  
**Meghan Winters,** Simon Fraser University

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**Transportation Research Board Staff**

**Bernardo Kleiner,** Transportation Safety Specialist  
**Mary Kissi,** Senior Program Associate  
**Freda Morgan,** Senior Program Associate
### Monday, April 13

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<td>8:00 a.m. – 9:00 a.m.</td>
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<td>9:00 a.m. – 10:30 a.m.</td>
<td>Opening Plenary Session &amp; Keynote Addresses</td>
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<td>• Health Impact Assessment (HIA): Big Picture</td>
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<td>• Health Impacts of Transit Use</td>
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<td>12:30 p.m. – 1:45 p.m.</td>
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<td>• CDC, Active Transportation and Health: Findings, Recommendations and Next Steps</td>
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<tr>
<td>5:30 p.m. – 7:00 p.m.</td>
<td>Poster Reception</td>
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## Tuesday, April 14

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<tr>
<td>7:30 a.m. – Noon</td>
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<td>• New Data Collection Methods and Technology</td>
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<td>• Determinants of Active Travel</td>
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<td>• Workshop: NCHRP Report 770 - Estimating Bicycling and Walking for Planning and Project Development</td>
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<td>• Workshop: The Health Economic Assessment Tool (HEAT)</td>
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<td>Closing “Town Hall” Session</td>
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* Presentation abstracts available online at: http://www.cvent.com/d/34qh66. Full presentations will be posted to the website following the conference.

* Workshop descriptions included on pages 15-17.
CONFERENCE AGENDA

Monday, April 13

8:00 a.m. - 9:00 a.m
Registration & Breakfast

9:00 a.m - 10:30 a.m.
Opening Plenary Session - Room 100

Welcome & Opening Remarks
Ralph Buehler, Chair TRB Committee on Bicycle Transportation and Virginia Tech
Janet Rankin, American College of Sports Medicine and Virginia Tech

Keynote Speakers
Barbara McCann, Director of the Office of Safety, Energy, and Environment, US Department of Transportation Office of the Secretary
Susan Handy, Ph.D., Professor Department of Environmental Science and Policy, University of California at Davis
James F. Sallis, Ph.D., Chief, Division of Behavioral Medicine, University of California
Audrey de Nazelle, Ph.D., Faculty of Natural Sciences, Centre for Environmental Policy, Imperial College London

10:30 a.m. - 10:45 a.m.
Networking Break

10:45 a.m. - 12:30 p.m.
Concurrent Sessions

Health Impact Assessment (HIA): Big Picture - Room 100
Moderator: Eloisa Raynault, Planning Communities, LLC

Presenters
• Endeavors in Transportation Health Impact Assessment, Arthur Wendel, CDC
• Use of Health Impact Assessment in Projects, Policies, and Plans to Promote Active Transportation, Andrew Dannenberg, University of Washington School of Public Health
• Exploring How Health Impact Assessments Monetize Health Benefits of Transportation Plans and Projects, Bethany Rogerson, Health Impact Project

Health Impact Models: The Health Economic Assessment Tool for Walking and Cycling (HEAT) - Room 201
Moderator: Sean Co, Metropolitan Transportation Commission

Presenters
• The Health Economic Assessment Tools (HEAT) for Walking and Cycling: Supporting the Integration of Active Mobility in Healthy and Sustainable Transport Solutions, Sonja Kahlmeier, Physical Activity and Health Unit, Epidemiology, Biostatistics and Prevention Institute, University of Zurich, Zurich, Switzerland
• Modeling Health Benefits of Active Transportation in Switzerland, Thomas Götschi, University of Zurich, Switzerland
• Health Benefits of the MassDOT Capital Investment Program, Christopher Porter, Cambridge Systematics, Inc.

Health Impacts of Transit Use - Room 208
Moderator: Meghan Winters, Simon Fraser University

Presenters
• Public Transit Use: An Unlikely Panacea to Solve the Physical Inactivity Crisis in Older Adults? Christine Voss, University of British Columbia, Canada
• Does Public Transit Generate New Physical Activity? Evidence from Individual GPS and Accelerometer Data Before and After Light Rail Construction in a Neighborhood of Salt Lake City, Utah, USA, Harvey Miller, The Ohio State University
• Examining the Impact of a New Light Rail Line on Active Transportation: A Natural Experiment, Brian Saelens, Seattle Children’s Research Institute and the Department of Pediatrics, University of Washington

12:30 p.m. - 1:45 p.m
Lunch

1:45 p.m. - 3:30 p.m.
Concurrent Sessions

Health Impact Assessment (HIA): Drilling Down with Examples - Room 100
Moderator: David Bassett, University of Tennessee-Knoxville

Presenters
• Integrating Health Impact Assessment into Road Safety Audits: Lessons from a case study in Clackamas County, Oregon, Steve White, Oregon Public Health Institute
• Monetizing Morbidity in Transportation and Climate Scenario Planning, Nicole Iroz-Elardo, PhD, Oregon Health Authority, Public Health Division
• Are we ready to embrace Health impact assessment?: Lessons Learned from integrating HIA and transportation planning, Donald Kostelec, Kostelec Planning

Health Impact Models: The Integrated Transport and Health Impact Model (ITHIM) - Room 201
Moderator: Thomas Götschi, University of Zurich

Presenters
• Cycling Health and Climate, James Woodcock, UKCRC Centre for Diet and Activity Research (CEDAR)
• Quantifying Health Impacts for Three Pathways in Transportation and Climate Scenario Planning, Andrea Hamberg, Oregon Health Authority, Public Health Division
• Calibrating the Integrated Transportation and Health Impact Modeling (ITHIM) Tool in Nashville, Tennessee, Geoffrey Whitfield, CDC
Evaluating Transportation Infrastructure - Room 208
Moderator: Jennifer Dill, Portland State University

Presenters
- Safer Streets, Stronger Economies: Lessons in Measuring Complete Streets Performance, Laura Searfoss, National Complete Streets Coalition / Smart Growth America
- Incorporating Public Health in Transportation Corridor Planning Studies, Beverly Bowen, ICF International
- The Meaning of Mean Streets: Associations Between Crime, Casualties and Sustainable & Active Travel Choices, Bruce Appleyard, San Diego State University

3:30 p.m. - 3:45 p.m.
Networking Break

3:45 p.m. - 5:30 p.m.
Concurrent Sessions

Large Scale Modeling - Room 100
Moderator: Thomas Götschi, University of Zurich

Presenters
- Substitution of Car Trips by Active Transport in 6 European Cities: A Health Impact Assessment Study, David Rojas-Rueda, Centre for Research in Environmental Epidemiology (CREAL), Barcelona, Spain
- Changing the Scope and Scale of Regional Travel Models to Better Estimate Pedestrian Activity: Applications for Public Health, Patrick Singleton, Department of Civil and Environmental Engineering, Portland State University
- Predicting Active Travel Behavior and Health Impacts of Regional Plans in California, Lawrence Frank, Urban Design 4 Health; University of British Columbia

Methods – Collecting Data with Innovative Surveys - Room 201
Moderator: Robert Schneider, University of Wisconsin-Milwaukee

Presenters
- Using Mobility Panel Data to Assess Physical Activity from Active Travel of Individuals over Time: Insights from Germany, Ralph Buehler, Virginia Tech
- Incorporating Health Measures into Vancouver’s On-Going Trip Diary Panel Survey and Other Initiatives as Part of the Healthy City Strategy, Dylan Passmore, City of Vancouver
- Is the Program Working? New Spatially-Discrete Tools for Rapid Assessment and Program Evaluation, Timothy Reardon, Metropolitan Area Planning Council
CDC, Active Transportation and Health: Findings, Recommendations and Next Steps - Room 208
Moderator: Prabasaj Paul, Centers for Disease Control and Prevention

Presenters

- Health and Transportation, Edward Christopher, Federal Highway Administration
- Active Transportation in the Health Context; Recent Research, Meetings and Challenges, David Berrigan, National Institutes of Health
- Active Transportation Data, Dan Goodman, Federal Highway Administration
- Increasing Walking through Wayfinding: The Walk to Fly Study Experience, Janet Fulton, Centers for Disease Control and Prevention
- Looking Ahead: Policy in Health & Transportation, Ken Rose, Centers for Disease Control and Prevention

5:30 p.m. - 7:00 p.m.
Poster Reception - Atrium

The poster session provides a unique opportunity for interaction between poster presenters and meeting participants in an informal setting during the evening reception. See following pages for poster titles and presenters.
1. The Relationship Between Utilitarian Walking, Utilitarian Cycling, and Body Mass Index in a Population Based Cohort Study of Adults: Comparing Random Intercepts and Fixed Effects Models,

Daniel Fuller, University of Saskatchewan

2. Building Capacity in Urban Atlanta: The Environmental Health Core (EHC) and the Community-Soil-Air-Water Initiative (C-SAW) at Georgia State University,

Katherine Hankins, Department of Geosciences, Georgia State University

3. Health Impact Assessment of Public Bicycle Schemes in Ireland,

David Rojas-Rueda, Centre for Research in Environmental Epidemiology (CREAL), Barcelona, Spain

4. The Impacts of Physical Activity Level on Bicyclist Ventilation Rates and the Uptake of VOC and PM Air Pollutants,

Alexander Bigazzi, Portland State University

5. Is Recreational Walking in Rural Areas a Substitute for Utilitarian Walking in Urban Areas?,

Anne Vernez Moudon, Urban Form Lab, College of Built Environments, University of Washington

6. Differences in Walking in Small U.S. Towns by Ethnicity and Language Spoken,

Brian Saelens, Seattle Children's Research Institute, University of Washington

7. The Partnership for Active Transportation – Creating a Broad-based Movement for Human-Powered Mobility to Build Healthy Places for Healthy People,

Elissa Fay Southward, Rails-to-Trails Conservancy

8. Perceptions of Bicycling Determinants to Identify Active Transportation Planning Targets, Stephanie Fowler, National Cancer Institute

9. The Potential for Health Cost Reductions Related to Transit Induced Physical Activity,

Zachary Elgart, Texas A&M Transportation Institute

10. On Developing the Transportation Exposome: Using a Panel Study of Commuters as an Integrative Platform of Acute Health Effects from Roadway Emissions,

Chandresh Ladva, Emory University

11. Physical Activity through Sustainable Transport Approaches (PASTA) – A Pan-European project on Determinants and Impacts of Active Transportation,

Thomas Götschi, University of Zurich, Switzerland

12. Trail Modeling and Assessment Platform (TMAP),

Thomas Götschi, University of Zurich, Switzerland

13. Physical Activity and Air Quality: A Transdisciplinary Research Opportunity,

Harold Kohl, University of Texas Health Science Center, Houston School of Public Health University of Texas at Austin

14. Determinants and Health Benefits of Active Commuting to School,

Robin DeWeese, Arizona State University

15. Models for Expanding Active Transportation for Healthier Communities,

Paula Reeves, Washington State Department of Transportation, Manager, Community Design and
Washington State Chapter of the American Planning Association, President Elect


Cameron Gordon, University of Canberra, Centre for Research and Action in Public Health (CeRAPH)

17. The Effect of Light Rail Transit on Physical Activity: Design and Methods of the Travel Related Activity in Neighborhoods (TRAIN) Study,

Casey Durand, University of Texas School of Public Health

18. Modeling by Committee: the State of Oregon’s Efforts to Coordinate Modeling Health Impacts of Transportation,

Eric Main, Oregon Health Authority, Center for Protection

19. Examining Travel Mode Choice in Underserved Populations,

Dangaia Sims, Penn State University

20. Integrating Health into Long Range Land Use and Transportation Planning,

Sherry Ryan, Chen Ryan Associates / San Diego State University

21. GPS Technology and Route Choice Models to Assess the Impact of Built Environment Characteristics on Walking Trips in Brazil,

Julio Celso Vargas, UFRGS - Universidade Federal do Rio Grande do Sul

22. Active Transportation in Portuguese Adolescents: Using PALMS to Detect Trip Modes,

Andreia Nogueira Pizarro, Ciafel - UP
Tuesday, April 14

7:30 a.m. - 8:30 a.m.
Registration & Breakfast

8:30 a.m. - 10:15 a.m.
Concurrent Sessions

New Data Collection Methods and Technology - Room 100
Moderator: Robert Schneider, University of Wisconsin-Milwaukee
Presenters
- Automatic Cyclists Data Collection for Transportation Health Impact Assessment, Tarek Sayed, University of British Columbia, Vancouver, BC, Canada
- Designing and Implementing a Temporary Regional Automated Bicycle Counting Program, Sherry Ryan, Chen Ryan Associates / San Diego State University
- Improving Active Transportation Data in HIAs with Automated Counters: Lessons from CA, William Riggs, California Polytechnic State University, San Luis Obispo
- BikeMaps: Citizen Web-Mapping for Safer Cycling, Meghan Winters, Simon Fraser University, Faculty of Health Sciences

Determinants of Active Travel - Room 101
Moderator: Ralph Buehler, Virginia Tech
Presenters
- Utilitarian and Recreational Walking Differ in Their Associations with the Built Environment, Bumjoon Kang, Department of Urban and Regional Planning, University at Buffalo, the State University of New York
- Prevalence and Correlates of Active Transportation Among Adults: The 2007-2011 Canadian Health Measures Surveys, Richard Larouche, Healthy Active Living and Obesity Research Group, Children’s Hospital of Eastern Ontario Research Institute
- What Moves Us: A Comparison of Perceived and Objective Predictors of Active Transportation Behaviors, Maggie Grabow, University of Wisconsin-Madison

Workshop: NCHRP Report 770 - Estimating Bicycling and Walking for Planning and Project Development - Room 208
Moderator: Rich Kuzmyak, Renaissance Planning
Presenters
- Overview of Planning Needs, Principles of Effective Healthy Community Design, How Tools are Valuable to this Process, Overview of Ongoing Research and Implementation Studies and Tools, Whit Blanton, Renaissance Planning
- Introduction to the GIS Accessibility Tool, Data Needs and Application Skills, and Demonstra-
tion of Application to Planning Examples, Alex Bell, Renaissance Planning

- Recent Enhancements of Accessibility Approach and Applications in Greater Washington DC area, Rich Kuzmyak, Renaissance Planning
- Other Planning and Policy Implications, Whit Blanton, Renaissance Planning

10:15 a.m. - 10:30 a.m.
Networking Break

10:30 a.m. - 12:15 p.m.
Concurrent Sessions

**Health Benefits of Active Travel - Room 100**
Moderator: Janet Rankin, Virginia Tech

**Presenters**
- Health Impact Assessment of Active Transport Policies: A Systematic Review, Natalie Mueller, Centre for Research in Environmental Epidemiology (CREAL), Barcelona, Spain
- Making the Connection Between Utilitarian Walking and Health Measures using the American Time Use Surveys, Miguel Lugo, University of Florida
- Energy Demand of Walkers and Riders of Electric-Assist Bicycles and Traditional Bicycles, Brian Casey Langford, Center for Transportation Research University of Tennessee
- An Investigation of the Relationship Between Walking and Cycling and Reduced Risk for All-Cause Mortality: Systematic Review and Meta-Analysis, Paul Kelly, University of Edinburgh

**Applications in Practice - Room 101**
Moderator: Sean Co, Metropolitan Transportation Commission

**Presenters**
- An Integrative Approach to Regional Bicycle and Pedestrian Planning: The Utah Collaborative Active Transportation Study, Julie Bjornstad, Fehr & Peers
- Building Health Evidence to Support Complete Streets in Toronto, Sherry Biscope, Toronto Public Health
- Estimating Walking and Cycling At the State Level, Michael Sellinger, Alta Planning + Design and Krista Nordback, Portland State University
- Improving Sustainable Development: Reducing Exposure to Traffic-Related Air Pollution, Lori Zeller, U.S. EPA Office of Sustainable Communities, Community Assistance and Research Division

**Workshop: The Health Economic Assessment Tool (HEAT) - Room 208**
Moderator: Sonja Kahlmeier, University of Zurich, Switzerland

**Presenters**
- HEAT - the Idea, the Approach and How it Works, Sonja Kahlmeier, University of Zurich
- Using HEAT for Cycling in the US: Experiences from Evaluating 4 Pilot Projects, Candace Rutt, Centres for Disease Control and Prevention
• Using HEAT in the Context of Research: Selected Examples from a Systematic Review, David Rojas-Rueda, Centre for Research in Environmental Epidemiology CREAL

12:15 p.m. - 1:30 p.m.
Lunch

1:30 p.m. - 3:15 p.m.
Concurrent Sessions

**Advances in Measurement and Analysis** - Room 100
**Moderator:** Jennifer Dill, Portland State University
**Presenters**
- Calibrating Walk Score to Better Predict Active Transportation Behavior, Lawrence Frank, Urban Design 4 Health; University of British Columbia
- The Effects of Socio-Economic and Transportation Accessibility on Area-Level Diabetes Counts: A Latent-Variable Structural Equation Model Approach, Yiyi Wang, Assistant Professor of Civil Engineering, Montana State University
- More Walkable-Oriented Zoning and Land Use Laws are Associated with Active Travel to Work, Jamie Chriqui, Division of Health Policy and Administration, School of Public Health, University of Illinois at Chicago

**The Role of Safety in Active Transportation and Health** - Room 101
**Moderator:** Meghan Winters, Simon Fraser University
**Presenters**
- The Relationship between Local Walkability, Pedestrian Danger and Active Travel to Work, Sandy Slater, University of Illinois at Chicago
- Joint Effects of Neighborhood Walkability and Parental Perceived Neighborhood Safety on Likelihood of Active Travel to School: A Longitudinal Follow-up of Operation Wixx, Nicoleta Cutumisu, Centre de recherche du CHUM, Département de médecine sociale et préventive, École de santé publique, Université de Montréal, Montréal, Canada
- Updating Crosswalk Policies in San Diego - Debunking the False Sense of Security Argument, Sherry Ryan, Chen Ryan Associates / San Diego State University

**Workshop: The Integrated Transport and Health Impact Model (ITHIM)** - Room 208
**Moderator:** James Woodcock, Centre for Diet and Activity Research (CEDAR), MRC Epidemiology Centre, University of Cambridge
**Presenters**
- James Woodcock, Centre for Diet and Activity Research (CEDAR), MRC Epidemiology Centre, University of Cambridge
- Marko Tainio, Centre for Diet and Activity Research (CEDAR), MRC Epidemiology Centre, University of Cambridge
- Neil Maizlish, California Public Health Department

3:15 p.m. - 3:30 p.m.
Networking Break
Closing “Town Hall” Session - Room 100

**Moderator:** Jennifer Dill, Portland State University

Join us for an active discussion on how to advance the research and practice linking active transportation and health. Members of the conference steering committee (Eloisa Raynault, Robert Schneider, and Thomas Götschi) will join panelists from our opening session (Susan Handy and Audrey de Nazelle) to discuss key questions covered at the conference: How well do we understand factors and policies that impact active travel? How well can we describe active travel? How well do we understand the health impacts of active travel? All attendees are invited to share their thoughts and ask questions.
There is growing acknowledgement that how communities are designed dramatically affects the lifestyle habits of their residents. Environments with a balanced mix of uses, compact design (density) to provide proximity, and a pedestrian-friendly street grid and sidewalk/bike network are shown to have lower rates of vehicle ownership and use and higher rates of walking, biking and transit use. Coincidentally, these types of communities encourage active transportation as a natural result of their design, providing an opportunity for physical exercise for people too busy or disinclined to play sports, go to a gym or run marathons.

Building effective active communities involves more than simply constructing sidewalks or bike trails. The land use and the supporting transportation infrastructure must be designed to reinforce each other in order to achieve the maximum benefit. Walking and biking are most productive when there is someplace worth walking or biking to, and when the corresponding network allows those connections to be made efficiently, safely, and -- if possible -- attractively. Finding the right combination of such measures is seldom intuitive, particularly when funding for transportation improvements is limited or must compete with other modes, or when strategic planning or zoning decisions are involved.

This workshop will introduce a new set of tools for planning communities that encourage active transportation. These tools were developed under NCHRP project 08-78 and recently published as NCHRP Report 770: *Estimating Bicycle and Pedestrian Demand for Planning and Project Development*. The NCHRP 770 Guidebook was created to meet this set of needs, and this workshop will guide participants in an understanding of the various tools and the types of applications for which they are suited, accompanied by some case study examples.

**Moderator: Rich Kuzmyak, Renaissance Planning**

**Presenters**

- Overview of Planning Needs, Principles of Effective Healthy Community Design, How Tools are Valuable to this Process, Overview of Ongoing Research and Implementation Studies and Tools, *Whit Blanton, Renaissance Planning*


- Introduction to the GIS Accessibility Tool, Data Needs and Application Skills, and Demonstration of Application to Planning Examples, *Alex Bell, Renaissance Planning*

- Recent Enhancements of Accessibility Approach and Applications in Greater Washington DC area, *Rich Kuzmyak, Renaissance Planning*

- Other Planning and Policy Implications, *Whit Blanton, Renaissance Planning*
The WHO Health Economic Assessment Tool (HEAT) for cycling was first launched in 2008, followed by a HEAT for walking in 2011 (www.euro.who.int/HEAT). Building on available epidemiological evidence of the relationship between regular cycling or walking and reduction of all-cause mortality in an adult population, HEAT was developed through an international collaborative effort by a multidisciplinary team of experts, for a target audience made up mainly of transport and urban planners. The tools apply a relatively easy-to-use, yet conservative and robust methodological approach. Ultimately, the tool is meant to facilitate putting active transportation in the horizon of decision makers in the fields of urban transport and planning, by providing an estimate of the order of magnitude of the economic value of health benefits of investing in cycling and walking. As such, the estimates produced using HEAT can be used as part of advocacy and awareness raising efforts, as well as of more comprehensive assessments of the benefits and dis-benefits of walking and cycling in relation to a given context, or as part of economic analyses (such as cost-benefit studies) of different interventions options.

The workshop will include a general overview of the HEAT tool, its key characteristics and way of use, complemented by two examples of documented applications from research and practice. The discussion will focus on feedback from the (potential) users’ perspective, which will be used to provide input to the further development of the tool.

Moderator: Sonja Kahlmeier, University of Zurich, Switzerland

Presenters

- HEAT - The Idea, The Approach and How it Works, Sonja Kahlmeier, University of Zurich
- Using HEAT for Cycling in the US: Experiences from Evaluating 4 Pilot Projects, Candace Rutt, Centres for Disease Control and Prevention
- Using HEAT in the Context of Research: Selected Examples from a Systematic Review, David Rojas-Rueda, Centre for Research in Environmental Epidemiology CREAL
ITHIM refers to a range of models developed at CEDAR to perform integrated assessments of the health effects of transport scenarios and policies at the urban and national level. ITHIM is used by both academic and practitioners in countries including USA, UK, India, Malaysia, and Brazil. The California Public Health Department has been at the forefront of getting ITHIM applied in practice and has developed a local version.

In ITHIM health effects of transport policies and scenarios are modelled through the changes in physical activity, road traffic injury risk, and exposure to fine particulate matter. The health effects of ITHIM are calculated as disability-adjusted life-years (DALY) and number of attributable deaths. Some versions of ITHIM include CO2 emissions.

ITHIM models exposure to physical activity by comparing weekly distributions under different scenarios. Walking, cycling and other types of physical activity are combined as MET hours per week of activity. Fine particulate matter air pollution risks are calculated for the general population (background rates) as well (in some versions) as mode specific rates for different transport modes. A comparative risk assessment method is used to estimate how changes in air pollution and physical activity result in changes in health burden on a range of outcomes. Road traffic injuries are modelled using a risk, distance and speed based model, with gender and age variation in risk included in some versions.

In this workshop we will explain the common background of ITHIM and explain the overall approach(es) used. We will split into two groups and simultaneously demonstrate the California ITHIM version in Excel and the web based THAT model. The session will then come back together to discuss with participants the vision for ITHIM and how future versions could better meet the potential requirements of both academic users and practitioners.

**Moderator:** James Woodcock, Centre for Diet and Activity Research (CEDAR), MRC Epidemiology Centre, University of Cambridge

**Presenters**
- James Woodcock, Centre for Diet and Activity Research (CEDAR), MRC Epidemiology Centre, University of Cambridge
- Marko Tainio, Centre for Diet and Activity Research (CEDAR), MRC Epidemiology Centre, University of Cambridge
- Neil Maizlish, California Public Health Department
Keck Center Floor Map

Floor 1

100 Lecture Hall (VTC)

Floor 2

206 (VTC) 207 209 210

203 205 204

201 (VTC)