



Active Transportation in the Health Context; Recent Research, Meetings and Challenges

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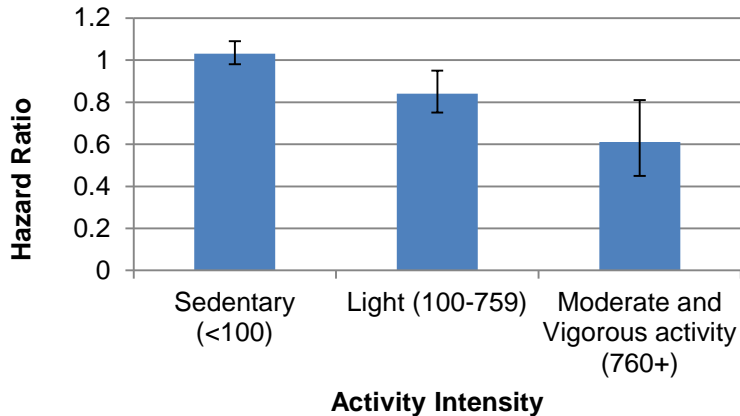
April 2015

My Remarks

- I. Active transportation from the standpoint of cancer prevention and control
- II. The 2012 CDC Active Transportation Expert Panel
- III. Activities, Funding and Opportunities from NCI/NIH

Why Does NCI Care?

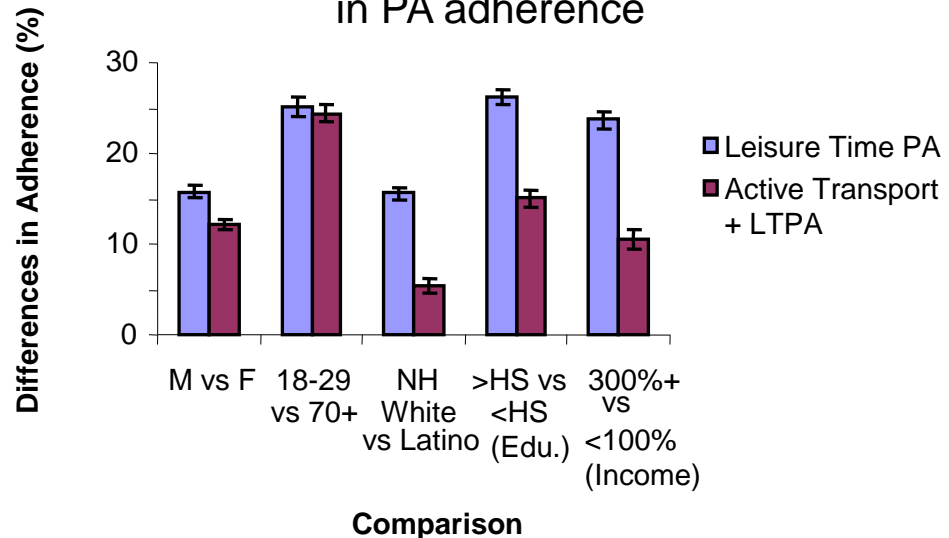
1. Activity is associated with reduced total mortality



2. Inactivity is associated with increased cancer risk

- Colon
- Post-Menopausal Breast
- Endometrial
- Others?

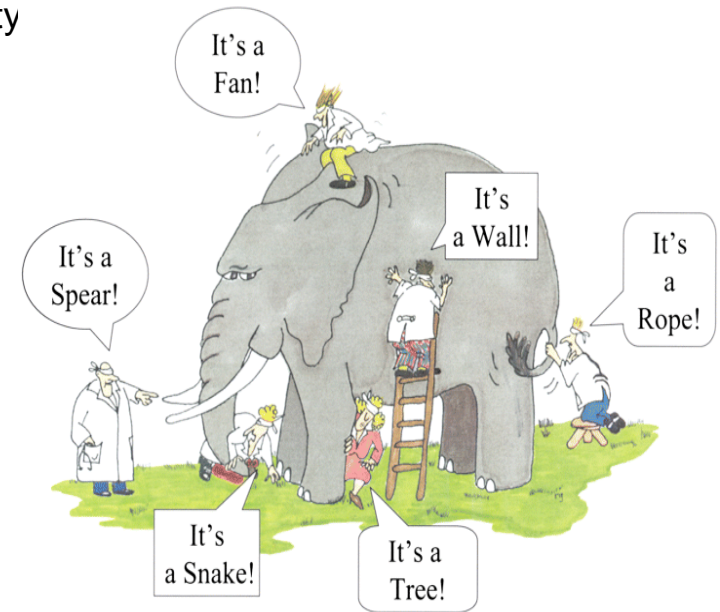
3. Active transportation reduces disparities in PA adherence



Koster et al. 2012
 Berrigan et al. 2015
 WCRF/AICR 2007
 Berrigan et al. 2006

AT: A Complex Construct

Construct	Example
1. Mode/Gait	Walk
2. Volume	30 minutes
3. Intensity/Speed	4 km/hr
4. Location	Rockville MD – Map/coordinates
5. Temporal Pattern	'Once a week'
6. Social Context	With Spouse
7. Destination	Library
8. Purpose	Check out Books
9. Substitution	Sometimes Drive
10. Enjoyment (Is it a pleasure?)	Yes
11. Fears	Dog
12. Moderators (e.g. bad weather)	Weather/Time Poverty



CDC 2012 Active Transportation Expert Panel: A two-day meeting Designed to:

- 1) Document the current state of AT measurement, particularly at the national level.
- 2) Develop joint efforts to promote and enhance monitoring/surveillance of AT.
- 3) Provide recommendations for key action items for near-term and longer-term collaboration among public health, labor and transportation.

Stakeholders Represented and Missing

Represented

- CDC
- NIH
- Census
- US DOT Federal Highway Administration
- Bureau of Labor Statistics
- USDA Economic Research Service
- University Researchers
 - Epidemiology
 - Planning
 - Public Affairs
 - Sensor Technology
- Non-Governmental Organization (Rails to Trails)
- Transportation- Private Sector Consulting and Research

Missing

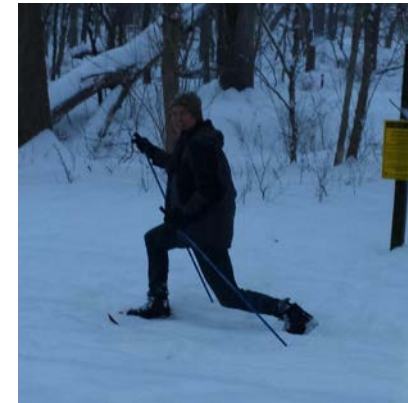
- Local Health and Transportation Department Staff
- NHTSA
- Engineers
- Policy Makers
- Safety Community – NHTSA, IHS, Safety Researchers
- Disability Community – Researchers, advocates
- State/City Health Survey Leaders

1. Document the current state of AT measurement, particularly at the national level

1. There are a myriad of national and regional systems measuring AT
 - a. Incomplete coverage of all the dimensions of AT
 - b. Broad spatial scale
 - c. Each system has methodological “features”
 - d. Its very difficult to access this data unless you are a real maven
2. We lack a harmonized ‘toolkit’ to enable measurement of AT at diverse spatial and temporal scales
 - a. The tools exist, but again you have to have team of mavens to put it all together
 - b. Technology is full of promise
3. AT measures serve many functions, we are not serving all these functions equally well

2. Develop joint efforts to promote and enhance monitoring/surveillance of AT

1. 2014 CDC/ACSM Round Table Planning the Future of Physical Activity Surveillance for Public Health August 18-19, 2014
2. This Meeting TRB/ACSM **Moving Active Transportation to Higher Ground: Opportunities for Accelerating the Assessment of Health Impacts**
3. 2015 National Health Interview Cancer Control Supplement perceptions of the Environment for Walking Module
4. And....?



3. Provide recommendations for key action items for near-term and longer-term collaboration among public health, labor and transportation

1. The workshop had myriad recommendations
2. **More focused efforts are needed addressing each practical challenge without losing site of connections across sectors**
3. Some themes deemed important

One database

Data coordination among agencies

Populating a repository of journal articles

Preparing an AT Guidebook and Toolbook/box/kit

More thoughtful writing and reflection

Creating a community of practice

Developing a research agenda

Getting the Right People at the Table

NIH Funding Related to Active Transportation

1. Support for Surveillance/Measurement Systems e.g. NHANES Accelerometry, NHIS Cancer Control Supplement, California Health Interview Survey etc

2. Sample Grants in the Transit Domain

1R01CA178343-01A1 SAELENS, BRIAN E STRUCTURAL & PROGRAMMATIC EFFECTS OF BUS RAPID TRANSIT ON PHYSICAL ACTIVITY (PD D. Berrigan NCI)

5R01DK101593-02 KOHL, HAROLD WILLIS EFFECTS OF LIGHT RAIL TRANSIT ON PHYSICAL ACTIVITY: A NATURAL EXPERIMENT (PD R. Kuczmariski NIDDK)

5R01CA157509-04 BROWN, BARBARA BESS COMPLETE THE STREETS 3 WAYS: EFFECTS ON ACTIVITY AND BMI (PD R. McKinnon NCI)

1R01DK103385-01 FORTMANN, STEPHEN PAUL HEALTH AND ECONOMIC EFFECTS OF LIGHT RAIL LINES: A NATURAL EXPERIMENT ((PD R. Kuczmariski NIDDK)

5R01HL114091-04 GORDON-LARSEN, PENNY ENVIRONMENTAL CHANGES AND HEALTH OUTCOMES ACROSS 25 YEARS: FOUR US CITIES (PD J. Reis, NHLBI)

3. Diverse Measurement Related Grants

More Exemplary Examples of NIH Funded Research Concerning Active Transportation: J. Aaron Hipp R21 EMERGING TECHNOLOGIES: ASSESSING PHYSICAL ACTIVITY WITH WEBCAMS AND CROWD-SOURCING

AMOS

687,687,769 images and counting

Welcome to AMOS, the Archive of Many Outdoor Scenes!

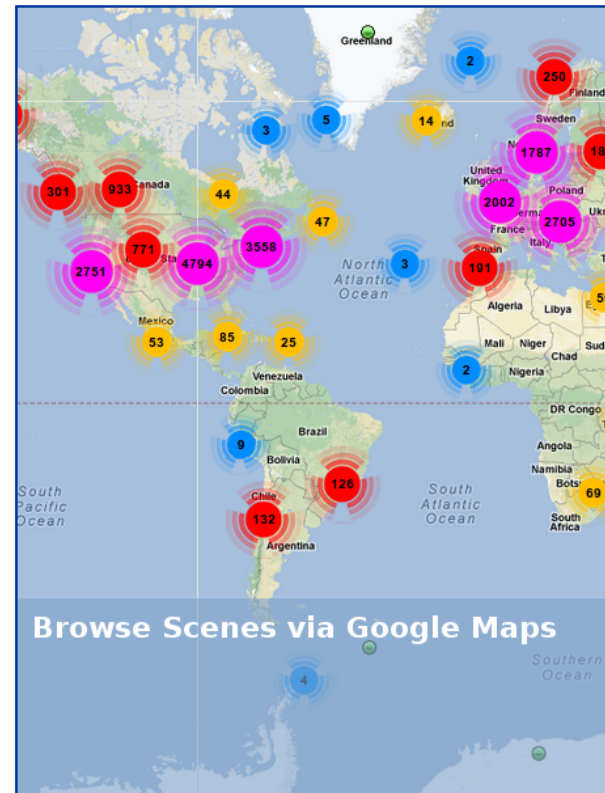
AMOS is a collection of long-term timelapse imagery from publicly accessible outdoor webcams around the world. We explore how to use these images to learn about the world around us, with a focus on understanding changes in natural environments and understanding how people use public spaces.

To support these applications, we work on fundamental research in camera geolocation, camera calibration, camera registration to GIS data, and the automatic annotation of events and objects in a scene.

The AMOS project began in March 2006 and is currently maintained at Washington University in St. Louis by [Robert Pleiss](#) and at the University of Kentucky by [Nathan Jacobs](#).

We encourage you to learn more about the [AMOS dataset, project participants, and publications](#). Options for browsing the dataset and contributing webcams to the archive are available through the links on the right.

Acknowledgements [+]



More Exemplary Examples of NIH Funded Research Concerning Active Transportation: **N. Colabianchi R21 IMPROVING ENVIRONMENTAL MEASURES IN OBESITY RESEARCH USING INNOVATIVE TECHNOLOGY**



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Selected Funding Opportunities

Time-Sensitive Obesity Policy and Program Evaluation (R01)

<http://grants.nih.gov/grants/guide/pa-files/PAR-12-257.html>

Obesity Policy Evaluation Research (R01)

<http://grants.nih.gov/grants/guide/pa-files/PA-13-110.html>

Developing Interventions for Health-Enhancing Physical Activity (R21/R33)

<http://grants.nih.gov/grants/guide/pa-files/PAR-14-321.html>

Improving Diet and Physical Activity Assessment (R01/R21)

<http://grants.nih.gov/grants/guide/pa-files/PAR-12-197.html>

- Most Funded Grants Are Actually Submitted to Omnibus Solicitations for Investigator-Initiated Grants
- Sample Grants Available on line at NCI:
<http://cancercontrol.cancer.gov/brp/funding-sample-application.html>

Conclusions

1. We need data to **match the spatial scale of evaluation** and planning needs
2. We also need this data to be **much easier to analyze**
3. We need more **data for systems models** of time use and physical activity
4. We need **better integration and greater accessibility** of federal data systems
5. We need **well supported toolkits** to measure AT and related environments
6. We need systems **to integrate such data across geographies and time**

These are all difficult challenges, they need to be broken up into manageable pieces that make a contribution on their own.

Start with: What is the Purpose of the Data!



Thanks! Questions?

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